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ABSTRACT

This report presents Fall, 1991 results of the New Jersey College Basic Skills Placement Testing which tests incoming college students and evaluates collegiate remedial courses. A summary of the findings notes that freshmen recorded poorer results on every section of the test compared to 1990 results, that in verbal skills 42 percent lacked proficiency, in computation 46 percent lacked proficiency and in elementary algebra 61 percent lacked proficiency. Other results are summarized by college sector, by 10-year trends (in verbal skills the percentage of test-takers who lacked proficiency reached a 10-year low), results for recent high school graduates (in 1990 and 1991 recent graduates were 58 percent of test-takers), by subgroups of recent graduates, and demographic changes. Another section treats dissemination of results to colleges, students, high schools, the state education board, the higher education community, and interested citizens. A final section treats outcomes for skill-deficient students who enroll in college remedial courses. Extensive figures and 25 tables present the data. Appendixes contain a description of the test, a list of participating independent and proprietary institutions, year to year score equating and a description of the proficiency levels. (JB)

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New Jersey College Basic Skills Placement Testing

Fall 1991

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Report to the Board of Higher Education on the Results of the

NEW JERSEY COLLEGE BASIC SKILLS PLACEMENT TESTING
FALL 1991 ENTERING FRESHMEN

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NEW JERSEY COLLEGE BASIC SKILLS PLACEMENT TESTING

Fall 1991

EXECUTIVE SUMMARY

The New Jersey College Basic Skills Council annually reports to the Board of Higher Education on the results of the New Jersey College Basic Skills Placement Testing (NJCBSPT) of students admitted to the state's public institutions of higher education (as well as participating independent colleges and degree-granting proprietary schools). The Basic Skills Assessment Program not only tests incoming students; it also evaluates collegiate remedial programs. Students identified as needing skills remediation are tracked for two years by the colleges and their outcomes are described by the Basic Skills Council. The most recent report, *Effectiveness of Remedial Programs in Public Colleges and Universities Fall 1987 - Spring 1989*, was presented to the Board of Higher Education in January 1992.

Levels of proficiency are estimated from performance on the NJCBSPT. Annually revised and administered over the past 14 years, the NJCBSPT is designed to assist colleges in placing already-admitted students into remedial or first college-level English and mathematics courses and to provide data on the status of the incoming class to the Board of Higher Education. Placement of students into courses is done by the individual colleges, using combinations of NJCBSPT scores and other information. In constructing their placement algorithms, the colleges have agreed not to use scores below the cut scores used by the Council in this report to define the "lack proficiency" category.

Main Findings

In sum, Fall 1991 freshmen recorded distinctly poorer results on the NJCBSPT, with greater percentages slipping into the "lack proficiency" category on every section of the test. Compared to Fall 1990, the number of students in the "lack proficiency" category increased five percentage points in verbal skills and three percentage points in both computation and elementary algebra. This slippage occurred across the board, affecting every sector of higher education in New Jersey. The decline in verbal skills was most severe in the county colleges. The decrease in computation skills is especially discouraging because it reverses a two-year trend of declining percentages scoring in the lowest proficiency category. These overall findings parallel similar declines in the 1991 Scholastic Aptitude Test results for New Jersey students.

Although recent high school graduates continue to outperform returning adults, analyses of results by subgroups show that the observed slippage in overall test results also occurred for recent high school graduates. This year's recent high school graduates recorded a three percentage point increase in the number falling

into the "lack proficiency" category of all three skill areas-- verbal, computation and elementary algebra.

The Test-Takers

Virtually all admitted students -- full- and part-time (including non-matriculated students who accumulate 12 credits), regular, special and Educational Opportunity Fund (EOF) students, English As a Second Language (ESL) completers, and transfers without both sophomore status and college-level English composition or mathematics credits -- are tested. This year the public and participating private colleges and universities in the state reported testing 50,181 students, a 3% increase over the Fall 1990 total. Spring 1992 semester admissions, which are not included in this report, raise the final total tested to approximately 69,000 students.

In addition to the increase in test-takers, the major findings this year include relative increases in the percentage of test-takers more than two years out of high school and an increase in minority students. In addition, there was a small decrease in the percentage who had taken a college preparatory sequence in high school.

- Of the 50,181 test-takers, 28,905 or 58% were recent (1991) high school graduates. The recent graduates increased by 506 or 2% over the previous year's figure. However, the recent graduates total remains well below the high of 32,236 tested in 1983. Students who were out of high school two or more years now make up 24% (12,271) of those tested, a 2% increase over the Fall 1990 figure.

- Of all students tested, 57% (a 1% decline) reported having taken an "academic" or college preparatory program in high school. Of all students tested at the county colleges, 46% (unchanged from last year) had taken an academic program in high school.

- Of the 1991 New Jersey high school graduates tested, approximately 79% (22,707) graduated from public high schools. These 22,707 test-takers represent 34% of the total June 1991 New Jersey public high school graduating class compared to last year's 32%. Thirteen percent could be identified as graduates of non-public schools, and 8% were uncoded or came from out-of-state high schools. Nearly 15% of the public high school graduates (3,487 or about 7% of all test-takers) could be identified as coming from "special needs" school districts (i.e., those that have qualified for increased state aid under the definitions in the New Jersey's Quality Education Act [QEA] of 1990).

- Students tested at community colleges (33,144) reached an all time high both in percentage of the total (66%) and in absolute numbers. State college students (15.8%) were at an all time low in terms of both numbers reported tested and the percentage of the total. Rutgers students (5,475) accounted for 10.9% of the total tested, unchanged from the previous year.

- The ethnic backgrounds reported by the test-takers were as follows: 5% Asian; 15% Black; 9% Hispanic; 62% White; 3% other; and, 7% no

response. Students identifying themselves as belonging to one of the three minority groups made up 28.8% of the total this year compared to 27.2% in 1990.

- The gender distribution of the test-takers was 54% female and 43% male, with 3% unidentified.

The Overall Results

The NJCBSPT contains sections on reading comprehension, sentence sense, essay, computation and elementary algebra. The overall proficiency in verbal skills is reported by a Total English composite score derived by combining the reading comprehension, sentence sense and essay subscores. Computation and elementary algebra proficiencies are determined directly from the respective subtests.

Fall 1991 students were judged to have the following levels of proficiency in verbal and mathematical skills according to the standards of college readiness set by the Basic Skills Council:

Statewide Results for 1991

In verbal skills:

20% appeared proficient,
38% appeared proficient in some areas, and
42% lacked proficiency.

In computation:

30% appeared proficient,
24% appeared proficient in some areas, and
46% lacked proficiency.

In elementary algebra:

12% appeared proficient,
27% appeared proficient in some areas, and
61% lacked proficiency.

Statewide data for the last ten years (Table 1) reveal that greater percentages of students lacked proficiency in verbal and mathematical skills this year than in previous years. For instance,

- The percentage of students (42%) who "lack proficiency" in verbal skills is the largest percentage in the last ten years.

- An increase in the percentage of students (46%) lacking proficiency in computational skills reverses a two-year trend toward improvement in this category, while the "lack proficiency" category percentage for elementary algebra (61%) matches the previous largest percentage lacking proficiency, the 1982 group.

These declines parallel the results of the Fall 1991 Scholastic Aptitude Test (SAT) scores for New Jersey: the Verbal scale mean declined one point to 417 and the Mathematics scale mean declined four points to 469. In a previous study it was found that these two test taking populations have about a 40% overlap.

Results by College Sector

The differing missions of the state's higher education sectors are mirrored in the selectivity of their admissions practices. The state colleges, Rutgers, and NJIT have selective admissions, while the 19 county/community colleges have open admissions policies. The test results parallel these differences; however, all colleges enroll some disadvantaged and academically underprepared students. The percentages of students in each proficiency category by public college sector for 1991 were as follows:

Proficiencies by College Sector for 1991

	APPEAR PROFICIENT %	APPEAR PROFICIENT IN SOME AREAS %	LACK PROFICIENCY %
COUNTY COLLEGES			
Verbal Skills	12	36	52
Computation	18	24	58
Elementary Algebra	4	20	76
STATE COLLEGES			
Verbal Skills	30	44	26
Computation	45	26	29
Elementary Algebra	19	43	39
RUTGERS			
Verbal Skills	54	38	8
Computation	76	17	8
Elementary Algebra	50	40	10
NJIT			
Verbal Skills	29	44	27
Computation	76	18	6
Elementary Algebra	49	46	5

In computation, the percentage lacking proficiency increased compared with 1990 at the county colleges, state colleges, Rutgers and NJIT. In algebra, the percentage in the lack proficiency category increased in all sectors except at NJIT, in comparison with 1990. Further, compared to Fall 1990 figures, the percentages of students who "appear proficient" in verbal and mathematical skills declined across all sectors with the sole exception of the county college elementary algebra "appear proficient" category (which remained constant at 4%).

Ten-Year Trends Noted by Sector

Observations over the 1982-91 period are described below for three college sectors. Unlike the other sectors, trends at NJIT cannot be as easily identified because the readily apparent year-to-year fluctuations in percentages are due at least in part to the relatively small number of freshmen.

In the verbal skills, the percentage of test-takers who lacked proficiency reached the worst level in ten years at the county colleges, the state colleges, and NJIT. The drop in performance was greatest at the county colleges.

- At the county colleges: 33,144 is the largest number of students ever tested. Their "lack proficiency" level in verbal skills reached 52%, a ten-year high. In elementary algebra, the "appear to be proficient" category remained steady at 4%. This was the only "appear proficient" category that was stable when compared to Fall 1990 sector-wide test results.

- At the state colleges: there were across-the-board increases in the "lack proficiency" levels. In the verbal area, the percentage of students (26%) lacking proficiency was at a ten-year high.

- At Rutgers: the percentages in the "lack proficiency" category remain low (8-10%) but increased by one percentage point in each skill area. In verbal skills, the percentage of students lacking proficiency is a nine-year high.

Results for Recent High School Graduates

During the 1980's, recent high school graduates ranged from 61% to 66% of the students tested. In 1990 and 1991, however, the recent graduates decreased to 58% (28,905) of the test-takers.

Seventy-three percent (73%) of the class of 1991 reported that they had taken an "academic" program in high school (unchanged from 1990). In parallel with the results described by college sector, the proficiencies for recent high school graduates declined across the board. In verbal skills, the "lack proficiency" percentage is at a ten-year high. The proficiencies for all recent graduates are given below.

Proficiency of Recent (1991) High School Graduates

	APPEAR PROFICIENT	APPEAR PROFICIENT IN SOME AREAS	LACK PROFICIENCY
Verbal Skills	24%	41%	35%
Computation	39%	25%	36%
Elementary Algebra	18%	36%	46%

Results by High School Program. Verbal and mathematical skills proficiencies of recent graduates who took their high school's "academic" program were considerably better than those of students who took "general" or "vocational" tracks. Among graduates who took the "academic" program, public and non-public school students were about equal in verbal skills. But public school graduates performed better in the computation and elementary algebra areas. However, among those who took the "general" program, non-public school test-takers had proportionately fewer students in the "lack proficiency" category (46% vs 59%) in verbal skills and equalled the public schools in the computation and elementary algebra "lack proficiency" categories.

Subgroups of Recent New Jersey High School Graduates

Public: "Special Needs" vs non-"Special Needs". Again this year, comparisons of test-takers from "special needs" vs "non-special needs" school districts were made. The category of "special needs" schools was defined in 1990 by the state legislature through the Quality Education Act (QEA) which defined "special needs" school districts as those inequitably funded by the state in the past. It then directed that increased funding be allocated to them in the future. This analysis is provided to set a benchmark against which to measure future changes. It is recognized that: 1) in the first year of QEA funding enhancements, the actual amounts received were appreciably lower than anticipated by the "special needs" districts, and 2) no test-takers have yet come to college from special needs districts where funding has been at equitable levels for four years. The key finding of the analysis is:

- Graduates tested from "special needs" public school districts had much greater percentages in the "lack proficiency" category in all skill areas when compared to public school graduates from "non-special needs" districts. This is a continuation of last year's finding.

Public vs non-public. Public vs non-public school graduates were compared both within and outside of "special-needs" school districts.

- Proportionately fewer recent New Jersey graduates from non-public high schools fell into the "lack proficiency" category in verbal skills (by 9 percentage points). However, there were proportionately fewer public than non-public high school graduates in the "lack proficiency" category both in computation (by 5 percentage points) and in elementary algebra (by 2 percentage points). Compared to 1990 analyses, the gap between non-public and public high school graduates increased by 2 percentage points in verbal skills and decreased by 1 percentage point in computation.

When four possible categories of school districts (public-non-special-needs, public-special-needs, non-public-non-special-needs, non-public-special-needs-located) were created specific patterns of interaction were noted:

- **In verbal skills:** fewer graduates of non-public schools located in "special needs" areas were in the "lack proficiency" category by 19 percentage points (57% vs 38%) than graduates from "special needs" public schools; non-public school graduates also appeared better prepared than public school graduates in "non-special needs" areas, but the difference was smaller (8 percentage points, 23% vs 31%). Compared to the 1990 analyses, the gap between "non-special needs" non-public and public high school graduates increased by 1 percent while the difference between "special needs" non-public and public showed no change.

- **In mathematics:** within the non-special needs areas, the difference between public and non-public school test-takers in the "lack proficiency" category in computation was six percentage points (33% vs 39%, repsectively). Within the "special needs" areas, the difference between public and non-public graduates increased from 1 point (in 1990) to 5 points (1991, 56% vs 51%, respectively) in the "lack proficiency" category in favor of the non-public school graduates. In elementary algebra, non-public schools in special needs areas had fewer students in the "lack proficiency" category (56% vs 59%) than public schools. However, in "non-special needs" districts, public schools had proportionately fewer students in the lack proficiency category (41 vs 43%).

Demographic Changes

It should be noted that there are some shifts in the background characteristics of the Fall 1991 test-takers when compared with their 1990 counterparts that likely contributed to a portion of the decline noted in this year's test results. For example, the percentage of non-recent graduates increased from 22% (19,753) to 24% (21,499). At the county colleges in particular, the percentage of non-recent grads has increased (from 52% to 55%), and the percentage who graduated high school three or more years before 1991 has increased even more (from 30% to 33%).

The percentage of non-recent graduates who reported taking an "academic" high school program declined by 5 percentage points state-wide this year (from 41% to 36%). Likewise, only 85% of this group compared to 93% in 1990 reported "understanding English better than any other language." Since each of these groups tends to score lower than the recent graduates, their increased representation in the total tends to lower the overall result. However, declines in performance were also noted in the recent graduate test-takers.

Of all the recent graduates tested this year, 52% tested at the community colleges, an increase of 3 percentage points since 1989. In addition, a two percentage point rise (from 19% to 21%) was noted in the number of recent high school graduates who "speak a language other than English at home."

Thus part of the explanation for this year's overall decline in basic skills proficiencies may be attributed to a changing mix of characteristics in the test-takers, with increases in the proportions of those who have produced lower scores in the past: more older people returning to colleges for retooling, more under-prepared students selecting the open admission colleges, and a greater diversity in the overall student body makeup.

It should be noted however, that while most of the shifts cited above were concentrated in the community college sector -- the sector with the largest decline in verbal skills -- this is not a complete or satisfactory explanation for the overall declines in performance noted in this year's testing. Test-takers at the state colleges and Rutgers also registered small declines in performance. This suggests that the higher education system is faced not just with changing student demographics but also with slightly less prepared "traditional" students as well.

Discussion

Compared to Fall 1990, colleges tested an additional 1,613 students, and in the last five years fall testing has risen by more than 5,800 students to this year's total of 50,181. This nearly matches the program's highest total for fall testing (51,321), recorded in 1983. Moreover, the final total for 1991-92 likely will reach 69,000 examinees, an all-time high for any year. Freshmen enrollment totals for FY 1992, especially at community colleges, can be expected to reflect this rise in the testing volume. The jump may be associated with the economic recession, especially considering that the program's previous high water mark in testing (1983) also coincided with a recessionary year. Colleges are an attractive alternative for high school graduates facing limited job opportunities and for members of the workforce who are victims of an economic downturn.

The number of students in the "lack proficiency" categories has been large since the testing program began, and the increase this year only adds to the serious concern for higher education. Further, the reversal of past small improvements in the size of the "lack proficiency" category in both computation and elementary algebra is particularly distressing. If, as in the past, colleges identify students for remediation at rates approximating the findings in this report, this will translate into hundreds of additional sections statewide. For example, the increase over last year of 3,277 students lacking proficiency in verbal skills equates to 131 additional sections based on an average of 25 students per class.

The continuing problem of enormous numbers of underprepared freshmen strains the resources of institutions trying to meet their missions. At community colleges, with open admissions policies and a commitment to universal opportunity for all high school graduates, the problem is particularly acute. It would be a mistake, however, to attribute this circumstance entirely to a recent failure of high schools. While the performance of recent New Jersey high school graduates was not satisfactory and, indeed, declined since last year, evidence points to a systemic problem that is unlikely to dissipate. The percentage of non-recent high school graduates in the test pool has grown steadily in the last five years and, in Fall 1991, represented 42% of all examinees.

There is insufficient information available on the backgrounds of the test-takers to ascertain the causes of the performance deterioration, but the demographic variables collected on the test-taking population offer some

recent graduates who had completed an academic program declined this year from 41% to 36%. In addition, more have indicated that English is not their best language. These self-reported data from students are consistent with the observed decline in student proficiencies and the increase in the number choosing open-door county colleges. These factors suggest that greater numbers of students who previously did not contemplate college are now pursuing post-secondary education.

There also was an increase this year in the percentage of students indicating they felt a need for improvement of their reading, writing, and mathematics skills. Historically, students have underestimated their need for skill improvement; previous reports have noted the disparity between student reports of need for skill improvement and NJCBSPT assessments. But the 1991 test-takers were much more likely than their predecessors to answer that they needed help in basic skills. For example, while the computation and elementary algebra results for the cohort ten years ago (1982) were similar to the 1991 group, this year's population displayed greater self-awareness of their deficiencies.

There are some exceptions to the pattern which points to this speculation that colleges in 1991 attracted greater numbers of students who, heretofore, may not have entertained post-secondary education. For example, in one subgroup, recent graduates at community colleges, there was no change in those who self-reported that they completed an academic (versus "general" or "vocational") program.

Institutional reports due later this year may shed some light on the situation, but it is unlikely that sufficient information will surface to provide a fix on the causes for the distressing declines in test results this year.

SUMMARY OF CAUTIONS IN INTERPRETING DATA IN THIS REPORT

- This is a report on admitted students tested at our colleges. A small percentage may not have subsequently enrolled.

- Each institution makes course placement decisions for individual students, often using multiple indicators. Hence the "lack proficiency" category is a strong estimate, but not an exact count of students who will be required to take remedial instruction. Some colleges use standards higher than the "lack proficiency" cut scores used here.

- Regarding comparisons of school types and district categories: the comparative data presented can only reflect the subset of all high school graduates tested at our colleges. An estimated 35-40% of New Jersey high school seniors go out of state to college. Consequently, academic outcomes of individual high schools cannot be fairly judged by the placement test results unless a high proportion of the graduates have been tested.

- Also, the difference in test results for public vs. non-public school graduates may not be attributable solely to differences in educational services because the data do not control for variables characterizing the populations who attend these two institutional types. For example, there may be significant differences in the skill levels and elementary school preparation of students when they entered these two high school types.

- The "special needs" public school districts are those so categorized by the Department of Education. Special needs, non-public schools are those located in the same municipalities as public, special needs districts. Students attending non-public schools in special-needs areas, however, may have come from a variety of municipalities.

INTRODUCTION

The New Jersey Basic Skills Testing Program was designed in 1977 with two purposes. First, the program was to provide information to aid colleges in placing students in appropriate courses during the freshman year. Second, the testing program was to report to the Board of Higher Education on the status of basic skills preparedness (in reading, writing, computation and elementary algebra) of the entering class in public colleges and universities (as well as participating independent colleges and degree-granting proprietary schools). These dual functions continue as the central purpose of the testing program.

In addition to placement testing, the New Jersey Basic Skills Assessment Program evaluates the effectiveness of public college remedial programs. Periodic reports are issued on two-year cohort studies comparing students needing and completing remediation with their non-remedial counterparts at each of the college's remedial programs. The most recent report, *Effectiveness of Remedial Programs in Public Colleges and Universities Fall 1987 - Spring 1989* was presented to the Board of Higher Education in January 1992.

Definition of Basic Skills

"Basic Skills" refers to skills of thought and communication that an individual needs not only to take advantage of the opportunities offered by a college education but also to become a fully participating member of society. These are not the minimal "coping skills" or "life skills" which many consider essential to mere survival (e.g., balancing a checkbook, reading a magazine, filling out a job application). Rather, the "basic skills" of reading, writing, and mathematics are essential for thinking, learning, and succeeding within the context of a college curriculum. They are fundamental building blocks which underlie all adult learning and which the Basic Skills Council[1] believes are required for full participation in our society.

In 1978, the Council, in its first report to the Board of Higher Education, defined and clarified what it meant by "basic skills":

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1. The New Jersey Basic Skills Council is an advisory group of eighteen faculty and administrators drawn from each of the college sectors in the state of New Jersey, the secondary school community, and two members-at-large.

By "basic skills" the Council means the tools of intellectual discourse used in common by participating members of all academic communities. These tools are the language of words and the language of mathematics. Students need these tools to extract information, to exercise and develop the critical faculties of the mind, and to express thoughts clearly and coherently. Without them, learning is impaired; communication is imprecise; understanding is impossible. A test of "basic skills," therefore, is a test to determine whether an individual has developed the practical working skills of verbal and mathematical literacy needed to take advantage of the learning opportunities that colleges provide.

To define "basic skills" in this way is not to deny the validity of other modes of communication -- within the artistic realm of discourse, for instance, the languages of music, motion, image, color, light, and texture express a universe of perceptions, feelings, and emotions which cannot be expressed adequately by words and numbers and logic alone. Nor is the Council's definition of the "basic skills" inimical to the value of diversity. We are, to the contrary, exceedingly sensitive to the differences between colleges: differences in their students; differences in their curricula and pedagogical philosophies; and differences in their missions. But in one respect all colleges are identical: their ultimate purpose is to foster learning. The Council asserts unequivocally that the "basic skills" of reading, writing, and mathematics are a prerequisite to learning at the college level. If the possession of these skills is "standardization," we believe that standardization in this sense is good.

The Basic Skills Council continues to subscribe to this definition, which is embodied each year in the development of the *New Jersey College Basic Skills Placement Test* (NJCBSPT).

Nature of the Test

The NJCBSPT was developed by the Basic Skills Council in conjunction with the Educational Testing Service (ETS) and first administered to freshmen entering public colleges in the Fall of 1978. To date more than 720,000 students have taken the NJCBSPT. The purpose of the test is placement at levels at and below the first college-level courses. It is designed to be relatively easy for well prepared students and to discriminate among underprepared students, thus affording colleges the needed range of scores to facilitate placement at several remedial levels. The test measures skills that students entering college should have. Indeed, the Basic Skills Council believes that the level of skills in reading, writing, and mathematics tested

by the NJCBSPT is minimal for all students graduating from high school, whether or not they intend to enroll in college.

The NJCBSPT is a three-hour-and-twenty-minute examination consisting of an essay and four multiple-choice sections: reading comprehension, sentence sense, computation, and elementary algebra. It is a criterion-referenced examination. The test questions address specific skills (such as understanding the main idea in a reading passage, writing in an organized fashion, solving algebraic equations, etc.) which are judged as the minimum necessary to begin college work. Students with adequate skills achieve high scores on the test; superior skills, however, cannot be discerned from the test. The distribution of scores on the multiple-choice sections of the test is not "normal" in the statistical sense, since the test is designed to make finer distinctions at the lower end of the range than at the upper end. (See Appendix A for further details on the NJCBSPT, including sample questions and the information provided to students before taking the test.)

The test is required of all freshmen (full- and part-time) entering New Jersey public colleges. In addition, eleven independent institutions in the state administer the NJCBSPT to their entering freshmen. (See Appendix B for a list of these independent colleges and universities.)

A new version of NJCBSPT is issued in February of each year, and colleges administer the test locally, on their own schedules, into February of the following year. To promote test familiarity, colleges also mail to each admitted student an *Information Bulletin* (see Appendix A) which contains sample questions for each subtest. This *Information Bulletin* assists the students in becoming familiar with the test questions prior to their testing. The student answer sheets (and computer data tapes, if applicable) are sent to ETS for scoring and data analysis under contract with the Department of Higher Education.

To assure comparability from year to year, each new form of the NJCBSPT is statistically equated to the previous form (See Appendix C for an explanation of equating procedures) and the scores are reported on a consistent scale: from 135 to 189 for verbal skills or "Total English"; 139 to 180 for computation; and, 148 to 190 for elementary algebra.

Information on NJCBSPT publications and reports can be found on the inside back cover of this booklet. A technical monograph on the statistical properties of each NJCBSPT form is provided annually by ETS and is available upon request.

Placement

Students are tested only after admission to college. The results of the tests are used, in conjunction with other information, for initial placement in English and mathematics courses. Proficiency categories for purposes of state-wide reporting are defined by the Basic Skills Council (see Appendix D), but individual institutions set their own algorithms for appropriate student placement using NJCBSPT test scores and other available information. Public colleges have agreed not to use placement levels below the Council's suggested minima. The Council has consistently recommended that placement be based not on one subtest score but on a combination of several test scores and other information (such as the Scholastic Aptitude Test scores, Test of Standard Written English score, and high school record).

Most public colleges and universities in the state use multiple criteria for placing students into either remedial or college-level courses. The system-wide result of these practices is that virtually all of the enrolled students in the "lack proficiency" category and some of the students in the "appear proficient in some areas" category are identified for remedial courses. The 1991 basic skills test results clearly indicate that the extent of remedial instruction that must be provided by our institutions may have increased dramatically.

Reporting Format

Test results for typical large-scale achievement and/or aptitude tests, such as the Scholastic Aptitude Test, are reported in terms of mean scaled scores and standard deviations. While these measures are useful for these types of instruments (and are included in Tables 1A - 6A for the NJCBSPT), the Basic Skills Council believes that for an instrument whose purpose is placement, the percentages of students who need, might need, or do not need remediation are the most important data to transmit to the Board of Higher Education. Consequently, the results reported here are in terms of the percentages of students falling into three proficiency categories: "lacked proficiency," "appear proficient in some areas," and "appeared to be proficient." Descriptions of these levels as related to test performance can be found in Appendix D. The uppermost category, "appear to be proficient," is so named because the NJCBSPT does not contain a sufficient number of "difficult" items to state with confidence that a given student is surely proficient in the skill area.

THE TEST-TAKERS

Policies on who must take the NJCBSPT are suggested by the Basic Skills Council and implemented by the Department of Higher Education. All entering full- and part-time students who seek a degree must be tested. In addition, full- and part-time transfer students who have not both attained sophomore status and received transfer credit for college-level composition and mathematics and students who have not already taken the test but who register for a course that would result in accumulating 12 or more credits must take the test. The Council recommends that students enrolled in a bilingual or English as a Second Language (ESL) program should not take the NJCBSPT until they have completed such a program.

Figure 1 illustrates the subgroups in the population tested this year. Recent high school graduates (28,905) make up 58% of the total (50,181) tested this year, an increase of 506. Non-recent graduates (21,499) made up approximately two-fifths of the test-takers. Eleven percent graduated in either 1990 or 1989, while 24% (a 2% increase) of all test-takers graduated prior to 1989. The older test-takers are concentrated in the community colleges (see Table 10).

More than half (54%) of the test-takers (Table 10) are female -- a pattern which holds in all sectors (except at NJIT). Most students (73%) indicate that they plan to enroll on a full-time basis. Full-time enrollment was the predominant choice at Rutgers (96%), NJIT (96%), the state colleges (83%), and is gaining at the community colleges (65%). The longitudinal data in Table 11 suggest that aspiration to full-time enrollment among all test-takers is holding steady at 73% for the past two years. In the early 1980's that percentage was 77-78%.

Only 57% of the test-takers reported taking an "academic" program in high school, compared to 58% in 1990 and the ten-year high of 63% in 1987. At Rutgers 89% of students have taken an "academic" high school program; at the state colleges, 74%; and at the community colleges, 46%. Statewide, 23% reported taking a "general" high school program; 11% took a "career-oriented" (i.e., business, vocational, industrial arts) program; 4% arrived with a General Education Diploma (GED); and 4% reported not having graduated at all.

This year the county colleges tested 33,144 students, an all time high both in percentage of the total (66%) and in absolute numbers. State college students were at an all time low in terms of both numbers (7,923) reported tested and the percentage (15.8%) of the total. Rutgers students (5,475) accounted for 10.9% of the total tested.

Of all the recent graduates, 79% (down 1%) reported attending public high schools in New Jersey, 13% attended non-public high schools and 8% were uncoded. Within the group from public schools 15% came from "special needs" school districts, 85% from "non-special needs" school districts.

Six percent of the test-takers reported that English was not their best language and 20% (a nine-year high) said that they spoke a language other than English at home (Table 11). Eighty-nine percent or more of the students tested in each sector reported that English was their best language. Greater percentages of students at Rutgers (30%) and NJIT (49%) than in the other sectors reported that they speak a second language at home. Four percent of the students tested indicated that they had completed an ESL program and an additional 1% reported still being enrolled in one.

The Basic Skills Council's policy is to defer the testing of students for whom English is a second language until they complete their postsecondary ESL instruction.

Then vs Now: Changes in the Test-Takers from 1982-1991

A comparison of the tested cohort from ten years ago reveals changes in some student characteristics. Some of the changes may correlate with generally lower academic performance on the NJCBSPT. While the gender ratio (43% male/54% female) is unchanged, student intentions toward full vs part-time enrollment have moved from 21% intending part-time status to 24%. As noted above, the percentage of the 1991 cohort who took an "academic" program in high school has dropped to 57% from the 61% recorded in 1982. More students in 1991 reported having taken a "general" high school program (23%) than in 1982 (18%).

Test-takers in 1991 reported having taken high school mathematics courses in higher percentages than in 1982: General Math, 50% vs 36%; Business Math, 20% vs 17%; Algebra I, 77% vs 71%; Algebra II, 59% vs 55%; Calculus 10% vs 8%. However, the performance of the 1991 test-takers on the NJCBSPT elementary algebra test is no better than in 1982 (See Table 1).

In 1982 at least 92% of the test-takers reported that English was their best language. For the 1991 group that percentage has dropped to 89%. Further, more test-takers in 1991 report speaking another language at home (20%) than in 1982 (15%).

Finally, there seems to be a growing awareness in the 1991 group that they need help in improving their academic skills. In the 1982 group 32% indicated that they wanted help in mathematics compared to 40% in 1991. Similarly, 40% wanted

help in improving study habits in 1991 compared to 30% in 1982. In writing, 26% thought they could use help in 1991 compared to 21% in 1982. As will be seen in the following section, all of these percentages turn out to be far more optimistic than the reality of the test results.

RESULTS

Statewide Findings

The proficiencies described in this report are based on the scores of 50,181 students tested at New Jersey public (and 11 private) colleges between March and October of 1991. This number is 3 percent higher than the total tested by the same time last year. Not all these students actually enrolled in New Jersey's colleges by the Fall of 1991. At the time of this writing, official statewide enrollment figures for new freshmen were not available.

Large proportions (in some sectors, the majority) of students enter our colleges lacking proficiency in at least some areas of reading, writing, computation, and elementary algebra. Table 1 and Figures 2-6 display the levels of proficiency exhibited by our entering students in 1991. The verbal skills area is based on the NJCBSPT Total English score, a composite of the reading comprehension, sentence sense, and essay subtests. Computation and elementary algebra proficiencies are based on the results from the computation and elementary algebra tests respectively.

Table 1 displays the state-wide results for 1982 through 1991. Over this time, the results were relatively stable, however the "lack proficiency" category in verbal skills reached a ten-year high of 42% in 1991 while the "lack proficiency" category in computation reached a five-year high of 46% and elementary algebra's "lack proficiency" category matches the ten-year worst performance (61%) of the 1982 group. (See Figure 5) Nevertheless, the mean scores for each subtest (see Tables 1A-6A) were extremely stable. This stability is due, in part, to the large number of students tested. To effect a change of only 1 percentage point within a proficiency category, for example, approximately 450 students who are near the cut points must have higher or lower scores in a given year.

For all test-takers in 1991,

In verbal skills:
42% lacked proficiency,
38% appeared proficient in some areas, and
20% appeared to be proficient.

In computation:
46% lacked proficiency,
24% appeared proficient in some areas, and
30% appeared to be proficient.

In elementary algebra:
61% lacked proficiency,
27% appeared proficient in some areas, and
12% appeared to be proficient.

Trends by College Sector

The percentages of students in each proficiency category for the four sectors of New Jersey public colleges (19 county colleges, 9 state colleges, 3 campuses of Rutgers, and the New Jersey Institute of Technology) are presented in Tables 2-5A for the years 1982-1991.

By virtue of their selective admissions processes, Rutgers, the New Jersey Institute of Technology (NJIT) and the state colleges enroll higher percentages of students who "appear proficient" than do the county colleges, which enroll students through an "open admissions" policy. Variations in the proficiency percentages in Tables 2-5 must be interpreted cautiously. Yearly raw-to-scaled-score conversions and consequent "rounding" of the percentages in the proficiency categories can have as much as a three-percentage-point effect on the size of the category from one year to the next. Consequently, no trend should be inferred from these data until the difference in the categories reaches five percentage points in one year or the trend is sustained over many years. By these criteria, the following longitudinal shifts have occurred:

- At the county colleges (Table 2), while the "lack proficiency" categories had been relatively stable, this year their percentages rose across skill areas with verbal skills posting the most dramatic rise (6 points). Over the ten-year period, only 4% of community college test-takers continue to "appear proficient" in elementary algebra.

- At the state colleges (Table 3), the number of students in the "lack proficiency" categories increased across skill areas with computation posting the most dramatic rise, 4 percentage points.

- At Rutgers (Table 4), the percentages in the "lack proficiency" category remain small (8-10%) but increased by one percentage point in each skill area. In verbal skills, the percentage of students lacking proficiency is a nine-year high.

- The relatively small number of freshmen at NJIT means that test score changes for only a few students can change the proportions of students in each proficiency category more dramatically than in sectors with a large number of students. Thus year-to-year fluctuations in percentages are larger at NJIT than in other sectors,

and trends cannot be as easily identified. The proportion of students lacking verbal proficiency (Table 5) has increased from 15% in 1982 to 27% in 1991. There has also been a concomitant decrease in the proportion who "appear proficient", from 42% of the class in 1982 to 29% in 1991. In elementary algebra those lacking proficiency have remained at a very low percentage (5%).

Recent High School Graduates

Of the 50,181 students tested, 28,905 or 58% were "recent" high school graduates, i.e., those who graduated in 1991 (see Tables 6 & 6A). Recent graduates constitute a greater proportion of test-takers at four-year institutions than at two-year colleges (see Table 10). Recent graduates as a percentage of test-takers, in descending order, were 91% at Rutgers, 86% at NJIT, 76% among the state colleges, and 46% among the county colleges.

Of all recent graduates, 53% were tested at the two-year institutions; 22% were tested at the state colleges; 17% were tested at Rutgers; 6% were tested at the private colleges; and 2% were tested at NJIT.

The proficiency percentages of recent graduates indicate that about one in three (35%) needed remedial work in reading or writing, 36% in computation and almost half (46%) in elementary algebra. In the verbal skills area, the "lack proficiency" percentage is at a ten-year high. Table 6 displays the state-wide results for recent high school graduates from 1982-1991. Figure 6 displays the following 1991 proficiency category breakdown for recent high school graduates:

In verbal skills:
35% lacked proficiency,
41% appeared proficient in some areas, and
24% appeared proficient.

In computation:
36% lacked proficiency,
25% appeared proficient in some areas, and
39% appeared proficient.

In elementary algebra:
46% lacked proficiency,
36% appeared proficient in some areas, and
18% appeared proficient.

Trends For Recent High School Graduates. The percentages of students in the "lack proficiency" and "appear proficient" categories (Table 6) in verbal skills have reached a ten-year highs and lows respectively. Factors which may be contributing to the decline in performance in the lower category include the fact that the tested population now includes a higher percentage of recent graduates who apparently did not originally intend to pursue college ("non-academic" program test-takers at community colleges) and the fact that the percentage of students who "speak a language other than English at home" is at an all time high of 21%.

Results by High School Program. Students admitted to the New Jersey public higher education system are diverse, not only in terms of their age and the year of their high school graduation, but also in the type of high school programs they took prior to college. According to the students' self-reports, 73% of the 1991 high school graduates came from an "academic" or college preparatory program (See Table 10). The other program types included "general" (19%), "career oriented", i.e., business, vocational or industrial arts (7%), and other (1%). These percentages are virtually unchanged from 1990.

The college basic skills proficiency of students in these subgroups who come from New Jersey high schools varies considerably. Table 6B displays the verbal skills proficiency results for each of the high school programs by high school type (public or non-public). Tables 6C and 6D display computation and elementary algebra proficiency results for this same group. Several findings emerge from Tables 6B, 6C and 6D. First, it is clear that the recent graduates from "academic" programs have considerably better verbal and mathematical skills than students who elected other programs, regardless of whether their schools were public or non-public. Second it is also clear that only 33% of the "college-prep" students appeared proficient in verbal skills (down 2 percentage points from last year), and at least 23% (2 percentage points higher than last year) would need remedial reading/writing in college. Third, students from non-public schools who selected the "general" high school program were much better prepared for college than those selecting the "general" program in public schools except in elementary algebra. However, the number of non-public school students from "general" programs was small (380).

The Basic Skills Council believes that the rudimentary skills tested by the NJCBSPT should be attained by all high school graduates -- regardless of whether they elect "academic" or "vocational" tracks. Moreover, the Council continues to discover large numbers of "non-academic" track high school graduates in the freshman cohorts of New Jersey's colleges.

Results by Category of High School. Results were analyzed by category of high school. In addition to comparisons of the performance of recent

graduates from public vs non-public schools, comparisons of "special needs" vs "non-special needs" school districts were made. The category of "special needs" schools was defined in accordance with the outcome of a long controversy in New Jersey over equity in school funding formulas. In 1990 the state legislature passed the Quality Education Act (QEA) which defined "special needs" school districts as those inequitably funded by the state in the past, and directed that increased funding be allocated to these districts in the future. The analysis in this report is done to continue to set benchmarks against which to measure expected improvement as the additional state funding begins to arrive at the special needs school districts. This past school year (1990-1991) was the first year of QEA funding, and the amounts received were appreciably lower than anticipated by the "special needs" districts. High school graduates from special needs districts which have had four years of equitable funding will arrive at the colleges in 1995, if such funding is provided starting in 1992.

Table 6E and Figure 7 present the skills proficiency breakdowns for public/non-public and "special needs"/"non-special needs" school district categories. "Special needs" non-public schools is an artificial category formed by grouping together the private schools geographically located in "special needs" public districts.

The results in Table 6E lend themselves to multiple comparisons. The first-order comparisons yield the following observations:

* Fewer non-public school students, compared to public school graduates, were in the "lack proficiency" category in verbal skills (26% vs 35%). Non-public school graduates also have higher percentages in the "appear proficient" category. Thus non-public school students appear better prepared overall in verbal skills. Recall, however, the finding from Table 6B that this apparent advantage for the non-public schools does not appear to derive from public school "academic" program participants' deficiencies but rather from the deficiencies among "general" program public school test-takers. Compared to the 1990 baselines, the percentage of non-public school students in the "lack proficiency" category in verbal skills improved by 1% while the percentage of public school students in the "lack proficiency" category worsened by 1%.

* Public school graduates, on the other hand, appear to have an advantage in computation proficiencies, as well as a smaller advantage in elementary algebra proficiencies. The "lack proficiency" category is 5 percentage points smaller for the public school graduates (37% vs 42%) than for non-public school graduates. In elementary algebra, the public/non-public difference is 2 percentage points in the "lack

proficiency" category (44% vs 46%) and 3 percentage points in the "appear proficient" category (20% vs 17%). Compared to the 1990 baselines, the gap between the "lack proficiency" and the "appear proficient" computation categories is smaller by 1%.

* Within the public schools, the 30 "special needs" districts high schools sent the colleges students whose basic skills proficiencies were significantly below those of "non-special needs" public schools in each skill area. Similar to 1990, more than half of the "special needs" graduates would likely be enrolled in remediation in each skill area, as displayed in Table 6E with dramatic increase (7%) in computation remediation need over 1990.

Statistical Interactions. Non-public schools geographically located in the same towns as public "special needs" districts (although not eligible for state funding) were analyzed so that comparisons and "interaction" effects could be studied within school types. One possible interaction would be the question of whether an observed advantage (to public or to non-public) was present equally in "special needs" vs "non-special needs" areas. When the size of the "lack proficiency" categories by school type (public/non-public) and district category ("special needs"/"non-special needs") are compared several statistically significant interactions were observed.

In verbal skills:

* Non-public school graduates located in "special needs" districts appeared to be better prepared than graduates from "special needs" public schools (19 percentage point difference [38 vs 57%] in the "lack proficiency" category). This is consistent with the 1990 finding.

* Non-public school graduates in "non-special needs" districts appeared to be better prepared than "non-special needs" public school graduates (8 percentage point difference [23 vs 31%] in the "lack proficiency" category), but the advantage was smaller than noted above in "within special needs" district comparisons. This is a 1 percentage point increase in the difference compared to 1990.

In mathematics:

* Public school graduates in "non-special needs" districts appeared better prepared in computation than "non-special needs", non-public school graduates. The difference in the "lack proficiency" category

was 6 percentage points (33 vs 39%). The non-public "special needs" students appear to have an advantage of 5 percentage points (51 vs 56%) in computation which is a reversal of the 1990 findings.

* In elementary algebra, public schools and non-public schools differed by 3 and 2 percentage points in the "lack proficiency" category in "special needs" and "non-special needs" districts, respectively. The advantage was to the non-public "special needs" students which is a reversal of the 1990 findings.

The differences noted here between outcomes of public and non-public school graduates may not be attributable solely to differences in educational services. The populations of students who enter each school type may be different at entrance. These entry differences cannot be controlled for in this report. It should also be noted that all such sub-group comparisons cannot accurately reflect on the **entire** cohort of either public or non-public high school graduates. Many students graduating from New Jersey's high schools go to out-of-state colleges. The results presented here accurately reflect the skills picture of only those students who came to New Jersey colleges that use the NJCBSPT.

Only by including all graduates in the testing process could accurate comparisons be made among individual school or district performances. Assuming that in-state college-going rates do not change dramatically in the near future, the data presented here will continue to serve as a reasonable baseline against which to measure future changes in the skills patterns of the recent high school graduates who take the NJCBSPT.

High School Mathematics and College Proficiency. The traditional mathematics preparation for college is at least three years of high school courses, including Algebra I, II and Geometry. Course variations, however, exist in high school curricula. Many students take a fourth year of high school mathematics, but only a minority (about 14% of the recent graduates tested) report taking calculus during this fourth year. Tables 6F and 6G display the relationship between high school mathematics curricula and subsequent proficiency levels on the NJCBSPT Computation (Table 6F) and Elementary Algebra (Table 6G) subtests. (Tables 6F and 6G include only New Jersey graduates who reported that their best language was English.) The data, as in previous years, indicate that the groups of students who took fewer than four years of mathematics are highly unlikely to exhibit proficiency in elementary algebra. For example, in Table 6G, course category #2 includes the 1,746 students who took only one year of algebra in high school. Of these, only 100 students (one-fifth less than 1990) scored high enough to "appear proficient in some areas" in elementary algebra and **no** students scored high enough to reach the "appear proficient" category. In category #5, of

the students who took the typical "college prep" program of Algebra I, II and Geometry, only 5% (down 1%) "appeared proficient" in elementary algebra. Of 7,400 students in this category, only 384 answered 25 or more of 30 elementary algebra questions correctly. In category #9, students who completed a "college prep" sequence that included calculus were much more likely to "appear proficient" (68%, [down 5 percentage points from 1990]) in elementary algebra. Table 10A indicates that Rutgers and NJIT together enrolled 46% (2,391 of 5,200) of all the tested students who took calculus in their high school curriculum.

Three generic levels of preparation emerge from the course categories in Tables 6F and 6G. First, students who have completed two (or fewer) years of mathematics have almost a zero chance of "appearing proficient" in elementary algebra. Presumably, these students emerged from "non-academic" high school tracks. Second, students who completed Algebra I & II, Geometry and Trigonometry (category 6) have approximately a 26% (down 4%) chance of "appearing proficient" in elementary algebra. Finally, students who complete four years of mathematics including calculus have two chances in three of "appearing proficient" in elementary algebra. The NJCBSPT elementary algebra subtest is composed of direct questions on algorithmic skills typically learned in the ninth grade. These data suggest that not only are the recent state-wide efforts to "define" topics for high school mathematics syllabi warranted but also that reasonable standards for student accomplishment should also be pursued vigorously.

It should be noted that the study of calculus is not necessarily the causal variable in ensuring proficiency in elementary algebra. It is probably true that only the best prepared students from the three-year high school mathematics sequence elect calculus. However, students who take senior mathematics courses other than calculus also display slightly higher algebra proficiencies than the students completing only the three-year sequence. The Council would like to see a strengthening of all mathematics instruction -- concentrating on arithmetic through elementary algebra -- so that more students will be sufficiently prepared to elect the fourth year of high school mathematics, regardless of their post-secondary intentions.

Non-Recent High School Graduates

Of all students tested this year, 42% either graduated before 1991, or did not graduate (3%). Graduates from 1991 as a percentage of total test-takers decreased by a percentage point compared with 1990. Non-recent graduates increased proportionately. As can be seen in Table 10, 24% of the test-takers indicated that they graduated before 1989. Of the 21,499 non-recent high school graduates, 11,824 or 55% were tested at the community colleges and 24% at the

state colleges. All sectors posted a gain in the number of non-recent high school graduates from a low of 1% at the state colleges to a high of 7% at NJIT. Compared with recent graduates in Table 10, the older students tend to elect part-time attendance status (45% vs. 8%) but their preference for part-time status has decreased by 7 percentage points since 1990. The older students are much less likely to have taken a "college-prep" program while they were in high school (36% vs. 73% for recent graduates). Compared to 1990, the percentage who took a "college-prep" program dropped by 5 percentage points. In addition, they were much more likely to have taken "General Math" or "Business Math" (Table 10A) instead of Algebra, Geometry or Trigonometry while in high school. This reaffirms the Council's observation that significant numbers of non-college bound students eventually enroll in the state's postsecondary institutions.

In Figure 7, the NJCBSPT proficiencies of the non-recent graduates lagged far behind those of recent graduates. As can be seen in Table 7, 46% of the 1990 non-recent graduates lacked proficiency in verbal skills, 54% lacked proficiency in computation, and 68% were seriously deficient in elementary algebra skills. Test-takers who graduated high school before 1989 were more proficient in verbal skills than the 1989 and 1990 graduates. However, the pre-1989 graduates were less likely to be competent in computation or elementary algebra. The vast majority of pre-1989 graduates (82%) would likely be placed into remedial or developmental algebra instruction at the colleges.

The large numbers of older students who need skills assistance pose a challenge, particularly to the community college sector where the majority enroll. Both academic advisement strategies and faculty sensitivity to adult learning styles must be appropriately matched to the non-recent graduate.

Proficiencies By Gender

The data in Table 10 indicate that women outnumber men in every college sector except NJIT. Table 8 presents the skills proficiencies by gender and college sector. In every sector (except NJIT) women display better verbal skills (i.e., lower percentages in the "lack proficiency" category, higher percentages in the "appear proficient" category) which is consistent with the 1990 finding. Men evidence higher proficiencies in both computation and elementary algebra (slightly more so in computation than in algebra) than women (except at NJIT).

The pattern described above is not surprising; it has been noted in most major testing programs, including the SAT and the ACT as well as many state K-12 assessments. However, the availability of background information on high school mathematics course-taking patterns in the present report permits a further analysis. When recent male and female graduates are matched on self-reported

mathematics course-taking patterns, the gender differences typically found in mathematics for the population as a whole are eliminated. Table 8A displays elementary algebra proficiencies by gender for four typical "college-prep" mathematics course-taking patterns. The results follow the general pattern noted in Table 6F in that four years of preparation, particularly where the fourth year is calculus, result in far higher proficiencies than three years of preparation (i.e., Algebra I, II, and Geometry).

What is of particular interest in Table 8A, however, is the fact that women's percentages in the "appear proficient" category exceed those of men in three of the four course patterns, and equal those of men in the *Algebra I, II, & Geometry* category. In addition the percentage of women in the "lack proficiency" category is lower than that of men in every course taking category. Further, it should be noted that the number of women who elected to take a four-year mathematics curriculum including calculus is actually higher than the men. However, neither gender elects to take a fourth year of high school mathematics in great proportion. Table 10A displays the fact that of all 1991 high school graduates only 14% report having taken calculus and 13% report having taken a senior-year "academic" mathematics course.

Discussion

Both the size of the "lack proficiency" categories and the fact that they have increased this year are serious concerns for the higher education system in New Jersey.

Further, the reversal of past small improvements in the size of the "lack proficiency" category in computation and elementary algebra warrants additional concern. When coupled with the increased numbers of test-takers, this finding will translate into an even greater number of sections of required remedial courses in the colleges in 1991-1992.

Compared to fall 1990, colleges tested an additional 1,613 students, and in the last five years fall testing has risen by more than 5,800 students to this year's total of 50,181 test-takers. This nearly matches the program's highest total for fall testing (51,321), recorded in 1983. Moreover, the final total for 1991-92 likely will reach 69,000 examinees, an all-time high for any year. Freshmen enrollment totals for FY 1992, especially at community colleges, can be expected to reflect this rise in the testing volume. If, as in the past, colleges identify students for remediation at rates approximating the findings in this report, this will translate into hundreds of additional remedial sections statewide. For example, the increase over last year of

3,277 students lacking proficiency in verbal skills equates to 131 sections based on an average of 25 students per class.

The continuing problem of enormous numbers of underprepared freshmen strains the resources of institutions trying to meet their missions. At community colleges, with open admissions policies and a commitment to universal opportunity for all high school graduates, the problem is particularly acute. It would be a mistake, however, to attribute this circumstance entirely to a recent failure of the high schools. While the performance of recent New Jersey high school graduates was not satisfactory and, indeed, declined since last year, evidence points to a systemic problem that is unlikely to dissipate. The percentage of non-recent high school graduates in the test pool has grown steadily in the last five years and, in Fall 1991, represented 42% of all examinees.

There is insufficient information available on the backgrounds of the test-takers to ascertain the causes of the performance deterioration noted in this report. The jump in testing volume may be associated with the economic recession, especially considering that the program's previous high water mark in testing (1983) also coincided with a recessionary year. Colleges are an attractive alternative for high school graduates facing limited job opportunities and for members of the workforce who are victims of an economic downturn.

As noted in the previous section, the demographic variables collected on the test-taking population do offer some opportunity for speculation. As a cohort, the test-takers show a greater percentage who have been out of high school for some years and who did not have an academic program when they attended high school. In addition, more have chosen county colleges, and more have indicated English is not their best language.

Previous reports in this series have noted the disparity between the small percentage of students' who answer "yes" to the "want to help to improve in (reading, writing, mathematics, study skills)" question on the test form and the large percentage that are identified for remediation. It is interesting to note that the 1991 test-takers were much more likely to answer that they needed help in basic skills subjects compared to the cohort ten years ago (1982) which displayed similar performance but less self-awareness.

DISSEMINATION OF NJCBSPT RESULTS

To Colleges

Since a central purpose of the NJCBSPT is to aid in placement of students into appropriate freshman courses prior to registration, the colleges are provided with summary reports six times during the testing year. During the peak testing period (summer), essays are read weekly (by two trained readers) and colleges can arrange for weekly reporting of results.

To Students

The *Information Bulletin* (see Appendix A) contains up-to-date information about the test along with sample test questions. Sufficient quantities of these bulletins are sent to the colleges for distribution to students prior to their taking the test. ETS mails individual student reports (scores) to the colleges. The institutions then inform the students of the results and use the NJCBSPT results as well as other student data for placement.

To High Schools

In the spring, the accumulated results of each high school's alumni are sent in aggregate form and by individual student scores (for the students who indicated permission on the test's answer sheet). The report to the principals contains an analysis of responses to each test question (e.g., the percentage of the class that was successful). In addition, a copy of this state-wide report with a cover letter from the New Jersey School Boards Association is sent to each school board chairperson.

To the Board of Higher Education and the Higher Education Community

This state-wide report is provided not only to the Board of Higher Education but also to all public and private institutions in New Jersey, to other state higher education agencies, and upon request to other interested parties.

To Interested Citizens

This and other Basic Skills Assessment Program publications (see inside back cover) are available without charge. In addition, program staff are available to

speak to school boards and disseminate information through such organizations as the Public Education Institute, the Education Commission of the States, The ERIC Network and other professional organizations.

OUTCOMES OF SKILLS-DEFICIENT STUDENTS WHO ENROLL IN COLLEGE REMEDIATION

The present report is one of a series that the Basic Skills Council presents to the Board of Higher Education. The follow-up to this report is the *Report on the Effectiveness of Remedial Programs, The New Jersey Public Colleges and Universities*, a two-year analysis of the outcomes of the students who are placed into over a hundred remedial programs throughout the state. Many severely deficient students require three to four semesters to complete their remedial work. Outcomes data for the students tested and reported on here will be collected in August 1993.

Reports on previous two-year cohorts have indicated that for those underprepared students who complete their college's prescribed remedial sequence, their skills are upgraded to a level where they can be retained within, and hence profit from, higher education. Those students completing remediation across all skill areas exhibit two-year retention rates similar to or higher than non-remedial students. In subsequent college-level courses that assume proficiency in the skills just remediated, students who complete remediation generally pass the courses at rates similar to non-remedial students. In contrast, the "successful survival rate" (a measure combining retention with the percentage of students who have a C or better average) of students who needed but did not complete remediation is only about a third that of those students who completed remediation. The Basic Skills Council's *Report on the Effectiveness of Remedial Programs in New Jersey Public Colleges and Universities, Fall 1987 - Spring 1989* (see back cover) contains a full description of these results.

Beginning with the students who entered in Fall 1987, those exiting college remedial programs were re-tested with an alternate form of the NJCBSPT. The expectation is that the preponderance of such students in a given program will, on re-test, reach or exceed their college's placement minimums for entry into the college-level writing and mathematics courses. Such re-testing is not intended to be the only measure used only determine whether a student moves on to the college-level course. Faculty judgment on course grades and examinations, not merely the NJCBSPT score, continues to determine whether individual students move into college-level courses. The Basic Skills Council monitors the results in terms of percentages in each program who reach the minimum standard. This re-test performance, in aggregate form, is one of the multiple indicators the Basic Skills Council uses to assess the effectiveness of public college remedial programs.

Figure 1
BACKGROUNDS OF 1991 TEST-TAKERS

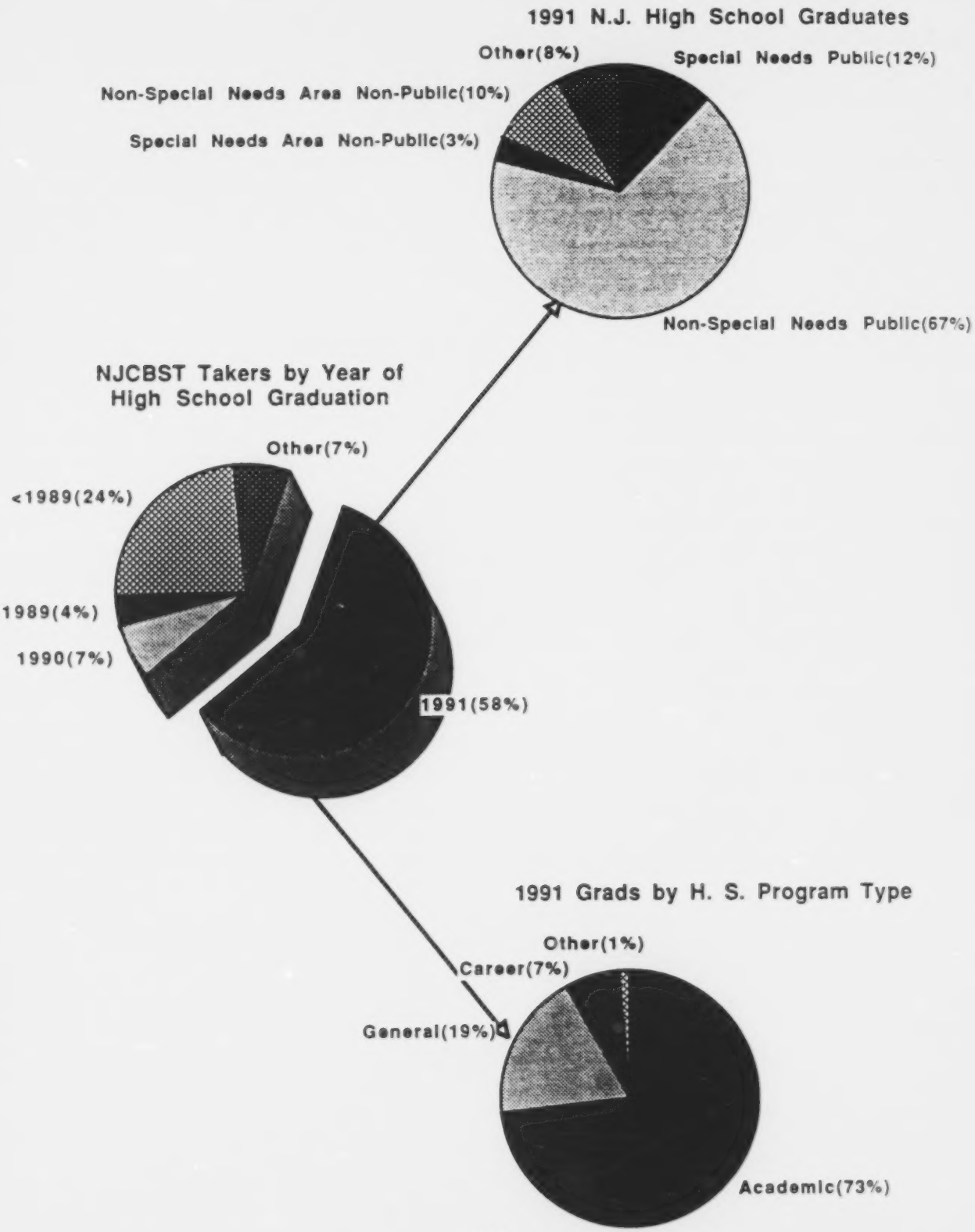
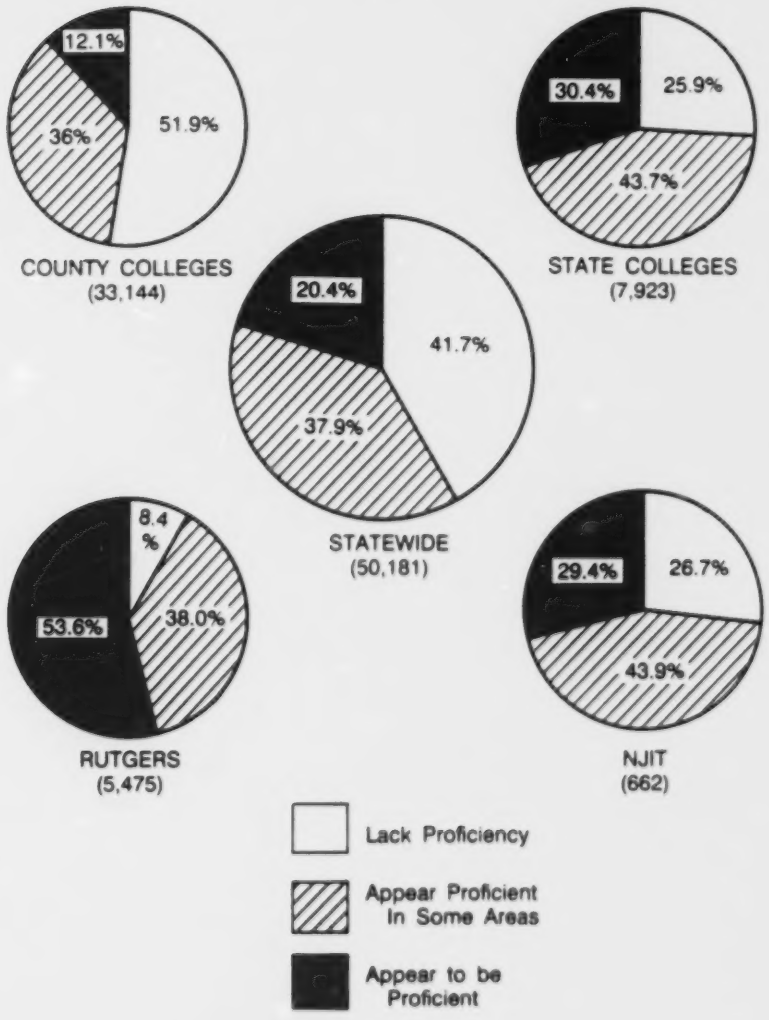


FIGURE 2

Levels of Student Proficiency by Sector
Fall 1991

Verbal*



*Based on Total English composite score (Reading Comprehension, Sentence Sense and Essay).

FIGURE 3

Levels of Student Proficiency by Sector
Fall 1991

Computation

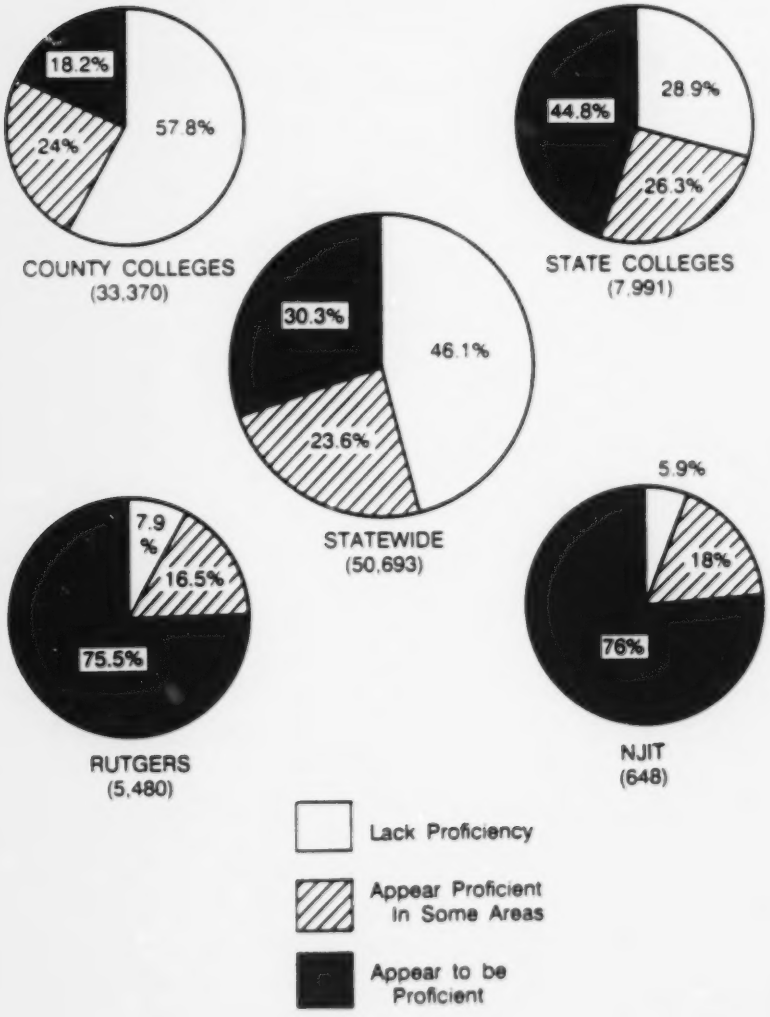


FIGURE 4

Levels of Student Proficiency by Sector
Fall 1991

Elementary Algebra

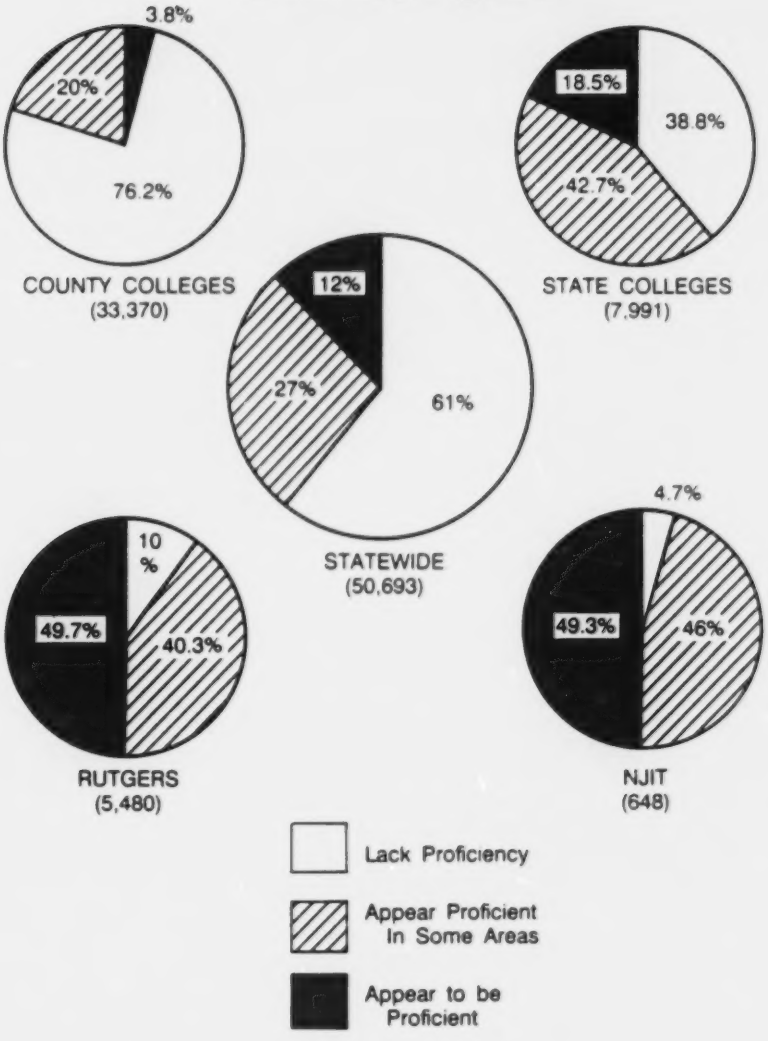


FIG. 5. "LACK PROFICIENCY" CATEGORY TEN YEAR HISTORY BY SKILL AREA

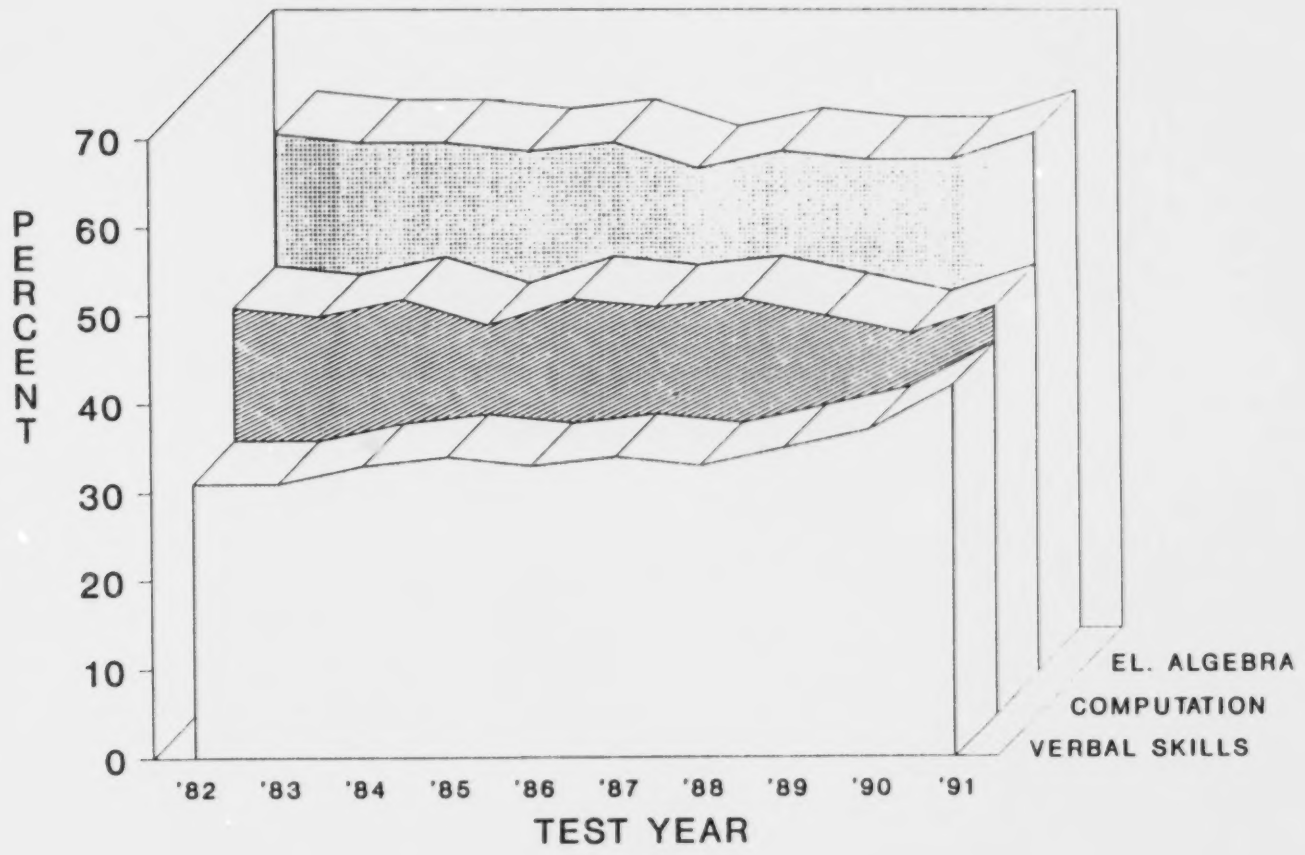
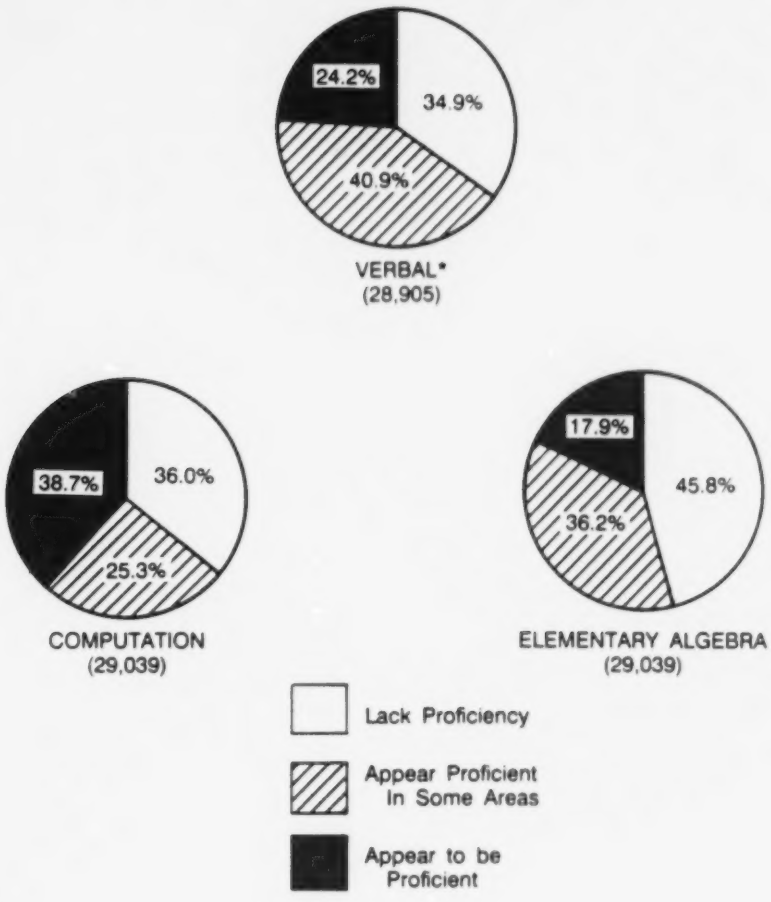


FIGURE 6

Levels of Student Proficiency by Skill Area
All Recent High School Graduates
Fall 1991



*Based on Total English composite score (Reading Comprehension, Sentence Sense and Essay).

FIG. 7. "LACK PROFICIENCY" CATEGORIES FOR 1991 TEST TAKERS BY GRADUATION YEAR

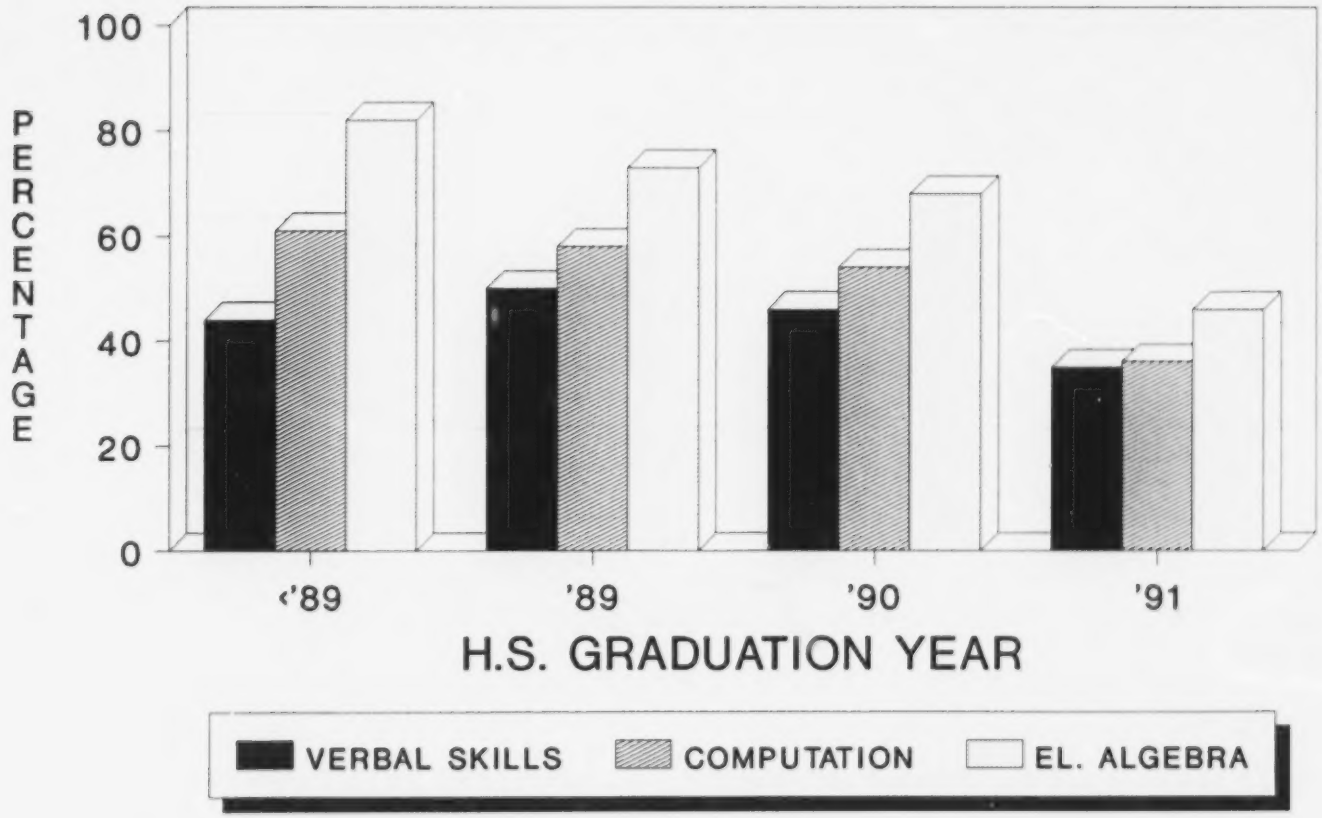


Fig. 8. VERBAL PROFICIENCY, 1991
GRADUATES BY HIGH SCHOOL CATEGORY

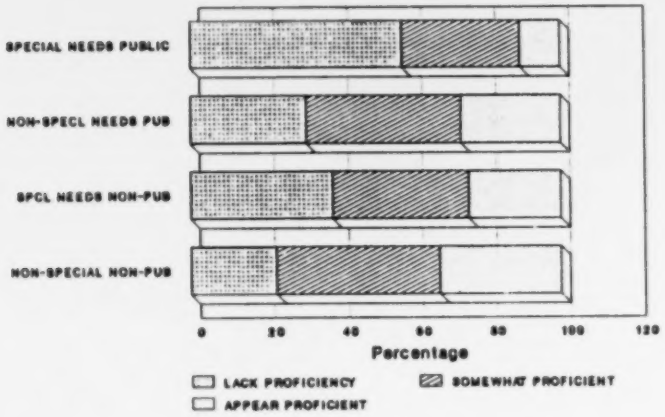


Fig. 8. COMPUTATION PROFICIENCY, 1991
GRADUATES BY HIGH SCHOOL CATEGORY

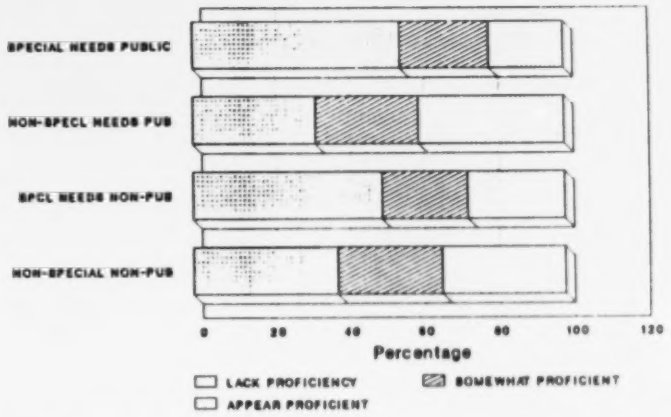


Fig. 8. ELEM. ALGEBRA PROFICIENCY, 1991
GRADUATES BY HIGH SCHOOL CATEGORY

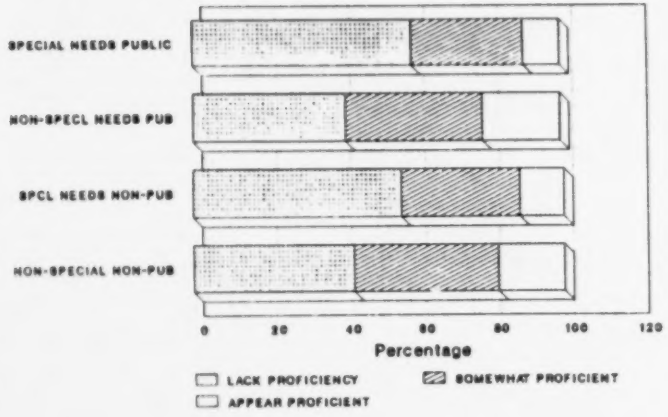


TABLE 1*

Ten Year Comparison of Statewide Test Results[1]

1982 - 1991

	1982	1983	1984	1985	1986	1987	1988	1989		1990		1991	
Number of Students Tested	51,135	51,321	46,465	44,344	44,284	42,603	48,358	48,791		48,568		50,181	
	%	%	%	%	%	%	%	%	#	%	#	%	#
VERBAL													
Lack Proficiency	31	31	33	34	33	34	33	35	16,966	37	17,652	42	20,929
Appear Proficient in Some Areas	41	40	41	40	41	40	41	41	19,593	40	19,045	38	18,994
Appear to be Proficient	27	29	26	26	27	27	26	24	11,480	24	11,453	20	10,258
COMPUTATION													
Lack Proficiency[2]	46	45	47	44	47	46	47	45	21,651	43	20,887	46	23,367
Appear Proficient in Some Areas	22	25	25	24	23	23	23	24	11,634	26	11,840	24	11,948
Appear to be Proficient	32	30	28	32	30	31	30	31	15,106	32	15,604	30	15,378
ELEMENTARY ALGEBRA													
Lack Proficiency[2]	61	60	60	59	60	57	59	58	28,207	58	27,978	61	30,705
Appear Proficient in Some Areas	28	28	28	29	26	29	26	28	13,600	29	13,869	27	13,740
Appear to be Proficient	11	12	12	12	15	15	15	14	6,584	13	6,484	12	6,248

*Includes students who were admitted but who may not have enrolled in college after being tested. Students from the participating independent colleges are included in the statewide totals. (See Appendix B for a list of these colleges.) Total number of students tested exceeds subtotals by skill area because some students do not complete all sections of the test.

1. See Appendix D for a description of proficiency categories.

2. Includes those students not attempting this portion of the test.

TABLE 1A

NJCBSPT Mean Scaled Scores
Statewide
1982 - 1991

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Number of Students Tested	51,135	51,321	46,465	44,344	44,284	42,603	48,358	48,791	48,568	50,181
MEAN SCALED SCORES:										
Reading Comprehension	163	163	161	161	161	161	161	160	161	159
(Standard Deviation)	(12.7)	(12.9)	(13.2)	(13.0)	(13.2)	(13.4)	(13.3)	(13.1)	(13.2)	(13.6)
Sentence Structure/Sense	165	165	164	164	164	164	164	164	164	163
(Standard Deviation)	(11.5)	(11.5)	(11.6)	(11.6)	(11.6)	(11.8)	(11.6)	(11.4)	(11.3)	(11.7)
Essay	6.9	6.5	7.0	7.1	7.0	6.9	7.1	7.3	7.0	6.8
(Standard Deviation)	(2.0)	(2.1)	(2.0)	(1.9)	(1.9)	(2.0)	(1.8)	(1.9)	(1.8)	(1.8)
Composition[1]	165	165	165	165	165	165	165	165	164	164
(Standard Deviation)	(10.9)	(10.7)	(10.9)	(11.1)	(11.2)	(11.4)	(11.0)	(10.8)	(10.6)	(11.6)
Total English[2]	164	164	163	163	164	163	163	163	162	162
(Standard Deviation)	(11.6)	(11.5)	(11.5)	(11.6)	(11.8)	(11.8)	(11.6)	(11.2)	(11.2)	(11.8)
Math Computation	165	165	165	165	165	166	165	165	166	165
(Standard Deviation)	(10.7)	(10.5)	(10.5)	(10.5)	(10.5)	(10.5)	(10.5)	(10.1)	(10.1)	(10.1)
Elementary Algebra	166	167	167	167	167	168	166	166	166	166
(Standard Deviation)	(11.7)	(11.8)	(11.6)	(11.7)	(11.9)	(11.8)	(12.3)	(12.3)	(12.4)	(12)

1. Composition is a composite score based on Sentence Structure/Sense and Essay.

2. Total English is a composite score based on all three reading and writing sections.

TABLE 2

Ten Year Comparison of Sector Test Results[1]

County Colleges
1982 - 1991

	1982	1983	1984	1985	1986	1987	1988	1989		1990		1991	
Number of Students Tested	30,380	30,677	28,191	26,288	26,322	24,117	29,209	30,157		31,472		33,144	
	%	%	%	%	%	%	%	%	#	%	#	%	#
VERBAL													
Lack Proficiency	41	42	44	45	43	46	44	47	13,821	46	14,451	52	17,210
Appear Proficient in Some Areas	40	40	40	40	40	39	41	40	11,857	39	12,131	36	11,921
Appear to be Proficient	19	18	16	16	16	15	16	13	3,988	15	4,627	12	4,013
COMPUTATION													
Lack Proficiency[2]	58	58	60	58	61	62	61	59	17,659	56	17,457	58	19,281
Appear Proficient in Some Areas	21	24	23	24	23	22	22	24	7,136	25	7,855	24	8,025
Appear to be Proficient	21	18	17	19	16	16	17	17	5,023	19	6,061	18	6,064
ELEMENTARY ALGEBRA													
Lack Proficiency[2]	77	76	76	77	77	76	77	77	22,912	74	23,207	76	25,426
Appear Proficient in Some Areas	19	20	20	20	18	20	19	19	5,775	22	6,903	20	6,669
Appear to be Proficient	4	4	4	4	5	4	4	4	1,130	4	1,263	4	1,275

1. See Appendix D for a description of proficiency categories.

2. Includes those students not attempting this portion of the test.

TABLE 2A

NJCBSPT Mean Scaled Scores
County Colleges
1982 - 1991

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Number of Students Tested	30,380	30,677	28,191	26,288	26,322	24,117	29,209	30,157	31,472	33,144
MEAN SCALED SCORES:										
Reading Comprehension	160	159	158	158	158	157	158	157	158	156
(Standard Deviation)	(13.3)	(13.4)	(13.4)	(13.1)	(13.5)	(13.5)	(13.4)	(13.1)	(13.3)	(13.5)
Sentence Structure/Sense	162	162	161	161	161	161	161	161	162	160
(Standard Deviation)	(11.9)	(12.0)	(11.9)	(11.8)	(11.9)	(12.1)	(11.7)	(11.4)	(11.3)	(11.6)
Essay	6.5	6.0	6.6	6.7	6.6	6.4	6.7	6.9	6.6	6.4
(Standard Deviation)	(2.0)	(2.1)	(2.0)	(1.9)	(1.9)	(2.0)	(1.8)	(1.9)	(1.8)	(1.8)
Composition[1]	162	162	162	162	162	161	162	162	162	161
(Standard Deviation)	(11.2)	(10.8)	(11.0)	(11.2)	(11.3)	(11.3)	(11.0)	(10.6)	(10.5)	(11.3)
Total English[2]	161	161	160	160	160	160	160	160	160	159
(Standard Deviation)	(12.0)	(11.6)	(11.5)	(11.5)	(11.7)	(11.6)	(11.4)	(10.9)	(11.0)	(11.5)
Math Computation	162	162	162	162	162	162	162	162	163	163
(Standard Deviation)	(10.6)	(10.1)	(10.1)	(10.2)	(10.1)	(10.1)	(9.9)	(9.5)	(9.7)	(9.6)
Elementary Algebra	162	162	162	162	162	163	161	161	161	161
(Standard Deviation)	(10.2)	(9.9)	(9.7)	(9.8)	(9.8)	(9.8)	(10.0)	(10.0)	(10.3)	(9.8)

1. Composition is a composite score based on Sentence Structure/Sense and Essay.

2. Total English is a composite score based on all three reading and writing sections.

TABLE 3

Ten Year Comparison of Sector Test Results[1]
State Colleges
1982 - 1991

	1982	1983	1984	1985	1986	1987	1988	1989		1990		1991	
Number of Students Tested	11,328	10,981	9,767	9,237	8,817	9,369	9,214	8,926		8,643		7,923	
	%	%	%	%	%	%	%	%	#	%	#	%	#
VERBAL													
Lack Proficiency	21	20	22	24	23	22	21	22	1,884	23	1,924	26	2,051
Appear Proficient in Some Areas	45	44	47	47	47	44	46	47	4,088	43	3,680	44	3,463
Appear to be Proficient	34	36	31	30	31	34	33	32	2,773	35	2,947	30	2,409
COMPUTATION													
Lack Proficiency[2]	35	33	36	31	36	33	31	28	2,444	25	2,117	29	2,308
Appear Proficient in Some Areas	26	30	31	30	29	29	28	29	2,546	28	2,379	26	2,105
Appear to be Proficient	39	37	34	39	35	38	41	44	3,890	47	4,029	45	3,579
ELEMENTARY ALGEBRA													
Lack Proficiency[2]	49	46	47	44	46	42	40	37	3,274	36	3,077	39	3,104
Appear Proficient in Some Areas	40	42	41	45	39	42	41	45	4,026	44	3,762	43	3,408
Appear to be Proficient	11	13	12	11	5	16	20	18	1,579	20	1,686	19	1,479

1. See Appendix D for a description of proficiency categories.

2. Includes those students not attempting this portion of the test.

TABLE 3A

NJCBSPT Mean Scaled Scores
State Colleges
1982 - 1991

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Number of Students Tested	11,328	10,981	9,767	9,237	8,817	9,369	9,214	8,926	8,643	7,923
MEAN SCALED SCORES:										
Reading Comprehension	165	166	164	163	164	164	164	164	164	163
(Standard Deviation)	(11.3)	(11.0)	(11.6)	(11.7)	(11.8)	(11.9)	(11.7)	(11.6)	(11.8)	(12.3)
Sentence Structure/Sense	167	168	167	167	167	168	168	168	168	167
(Standard Deviation)	(9.9)	(9.8)	(10.0)	(10.2)	(9.9)	(9.8)	(10.1)	(9.5)	(9.6)	(10)
Essay	7.3	7.0	7.4	7.4	7.4	7.3	7.4	7.7	7.5	7.3
(Standard Deviation)	(1.8)	(1.9)	(1.8)	(1.7)	(1.7)	(1.8)	(1.6)	(1.9)	(1.7)	(1.7)
Composition[1]	167	168	168	167	167	168	168	168	168	168
(Standard Deviation)	(9.5)	(9.2)	(9.4)	(9.7)	(9.6)	(9.8)	(9.6)	(9.4)	(9.3)	(10.2)
Total English[2]	167	167	167	166	166	166	167	166	167	166
(Standard Deviation)	(10.0)	(9.7)	(9.9)	(10.1)	(10.2)	(10.2)	(10.1)	(9.8)	(9.9)	(10.4)
Math Computation	167	168	167	168	168	168	169	169	170	169
(Standard Deviation)	(9.4)	(9.2)	(9.3)	(9.2)	(9.3)	(9.1)	(9.1)	(8.7)	(8.4)	(8.9)
Elementary Algebra	168	169	169	169	169	170	171	171	171	171
(Standard Deviation)	(10.7)	(10.8)	(10.5)	(10.3)	(10.7)	(10.7)	(11.0)	(10.8)	(11.1)	(11)

1. Composition is a composite score based on Sentence Structure/Sense and Essay.

2. Total English is a composite score based on all three reading and writing sections.

TABLE 4

Ten Year Comparison of Sector Test Results[1]

Rutgers
1982 - 1991

	1982	1983	1984	1985	1986	1987	1988	1989		1990		1991	
Number of Students Tested	6,219	6,251	5,856	6,550	6,753	5,573	5,712	5,849		5,085		5,475	
	%	%	%	%	%	%	%	%	#	%	#	%	#
VERBAL													
Lack Proficiency	9	6	7	7	7	7	6	7	387	7	329	8	461
Appear Proficient in Some Areas	39	30	33	33	32	30	30	33	1,939	36	1,813	38	2,081
Appear to be Proficient	53	64	60	60	61	63	64	60	3,518	58	2,937	54	2,933
COMPUTATION													
Lack Proficiency[2]	13	10	10	9	11	11	9	8	472	7	332	8	435
Appear Proficient in Some Areas	18	18	20	18	19	17	17	16	957	15	760	17	905
Appear to be Proficient	69	72	70	72	70	72	74	76	4,420	79	3,991	76	4,140
ELEMENTARY ALGEBRA													
Lack Proficiency[2]	18	14	13	13	13	13	12	11	642	9	457	10	547
Appear Proficient in Some Areas	45	39	39	44	36	35	32	37	2,182	37	1,879	40	2,207
Appear to be Proficient	37	47	48	43	51	52	57	52	3,025	54	2,743	50	2,726

1. See Appendix D for a description of proficiency categories.

2. Includes those students not attempting this portion of the test.

TABLE 4A

NJCBSPT Mean Scaled Scores
Rutgers
1982 - 1991

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Number of Students Tested	6,219	6,251	5,856	6,550	6,753	5,573	5,712	5,849	5,085	5,475
MEAN SCALED SCORES:										
Reading Comprehension	170	171	170	170	170	170	171	170	171	169
(Standard Deviation)	(8.5)	(8.0)	(8.6)	(8.6)	(8.7)	(8.8)	(8.2)	(8.4)	(8.0)	(9.3)
Sentence Structure/Sense	171	172	173	172	172	173	173	173	173	173
(Standard Deviation)	(8.6)	(7.1)	(7.1)	(7.2)	(7.3)	(7.3)	(7.0)	(6.7)	(6.5)	(6.8)
Essay	7.8	7.9	8.2	8.2	8.2	8.2	8.2	8.4	8.0	8.0
(Standard Deviation)	(1.6)	(1.7)	(1.6)	(1.5)	(1.5)	(1.8)	(1.5)	(1.6)	(1.5)	(1.5)
Composition[1]	171	173	173	173	173	173	173	173	172	173
(Standard Deviation)	(7.6)	(7.3)	(7.3)	(7.7)	(7.7)	(8.1)	(7.5)	(7.3)	(7.1)	(7.8)
Total English[2]	171	173	172	172	173	173	173	173	172	172
(Standard Deviation)	(7.7)	(7.4)	(7.6)	(8.0)	(8.0)	(8.3)	(7.8)	(7.6)	(7.3)	(8.0)
Math Computation	173	174	174	174	174	175	175	175	175	175
(Standard Deviation)	(7.3)	(6.8)	(6.8)	(6.7)	(7.0)	(6.9)	(6.6)	(6.3)	(5.7)	(6.2)
Elementary Algebra	177	179	179	179	179	180	180	180	180	180
(Standard Deviation))	(9.7)	(9.6)	(9.3)	(9.6)	(9.4)	(9.4)	(9.2)	(9.1)	(8.8)	(9.0)

1. Composition is a composite score based on Sentence Structure/Sense and Essay.

2. Total English is a composite score based on all three reading and writing sections.

TABLE 5

Ten Year Comparison of Sector Test Results[1]

NJIT
1982 - 1991

	1982	1983	1984	1985	1986	1987	1988	1989		1990		1991	
Number of Students Tested	722	599	541	497	472	489	555	656		638		662	
	%	%	%	%	%	%	%	%	#	%	#	%	#
VERBAL													
Lack Proficiency	15	15	20	23	19	24	20	25	165	23	146	27	177
Appear Proficient in Some Areas	43	42	38	43	42	41	41	43	279	45	288	44	291
Appear to be Proficient	42	44	43	33	39	35	39	32	210	32	202	29	195
COMPUTATION													
Lack Proficiency[2]	4	5	8	5	6	11	6	8	52	5	31	6	38
Appear Proficient in Some Areas	11	13	17	14	16	14	16	19	123	17	106	18	117
Appear to be Proficient	85	82	75	80	78	75	78	73	481	79	500	76	493
ELEMENTARY ALGEBRA													
Lack Proficiency[2]	5	4	6	4	4	8	6	7	45	5	30	5	31
Appear Proficient in Some Areas	37	35	38	43	30	34	34	45	293	39	250	46	298
Appear to be Proficient	58	61	56	52	66	58	60	48	317	56	357	49	319

1. See Appendix D for a description of proficiency categories.

2. Includes those students not attempting this portion of the test.

TABLE 5A

NJCBSPT Mean Scaled Scores
NJIT
1982 - 1991

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Number of Students Tested	722	599	541	497	472	489	555	656	638	662
MEAN SCALED SCORES:										
Reading Comprehension	168	169	162	165	167	165	166	164	164	163
(Standard Deviation))	(10.2)	(10.2)	(11.5)	(12.0)	(10.4)	(11.6)	(11.3)	(12.1)	(12.1)	(11.9)
Sentence Structure/Sense	170	170	169	168	169	168	169	168	168	168
(Standard Deviation)	(9.0)	(8.9)	(9.5)	(10.4)	(9.5)	(10.9)	(9.3)	(10.1)	(10.3)	(9.5)
Essay	7.2	7.0	7.5	7.1	7.2	7.2	7.2	7.6	7.3	7.1
(Standard Deviation)	(1.7)	(1.9)	(1.9)	(1.8)	(1.6)	(1.9)	(1.7)	(1.8)	(1.7)	(1.7)
Composition[1]	168	169	169	167	168	167	168	167	168	167
(Standard Deviation)	(8.8)	(8.8)	(9.6)	(10.2)	(9.2)	(10.7)	(9.6)	(9.6)	(9.5)	(10.1)
Total English[2]	168	169	168	166	168	167	167	166	167	166
(Standard Deviation)	(9.2)	(9.2)	(10.3)	(10.7)	(9.7)	(10.9)	(10.1)	(10.3)	(10.1)	(10.3)
Math Computation	175	176	175	175	176	175	176	175	176	175
(Standard Deviation)	(5.1)	(5.1)	(6.1)	(5.7)	(5.8)	(6.7)	(5.4)	(6.2)	(5.1)	(5.4)
Elementary Algebra	182	183	181	182	183	181	182	181	181	181
(Standard Deviation)	(6.6)	(6.5)	(7.7)	(7.3)	(6.7)	(8.2)	(7.3)	(7.6)	(7.5)	(7.3)

1. Composition is a composite score based on Sentence Structure/Sense and Essay.

2. Total English is a composite score based on all three reading and writing sections.

TABLE 6

Ten Year Comparison of Statewide Results for Recent High School Graduates[1]

1982 - 1991

	1982	1983	1984	1985	1986	1987	1988	1989		1990		1991	
Number of Students Tested	31,964	32,236	28,466	27,291	27,447	28,169	30,883	30,179		28,399		28,905	
	%	%	%	%	%	%	%	%	#	%	#	%	#
VERBAL													
Lack Proficiency	26	26	29	29	28	28	28	29	8,763	32	8,922	35	10,101
Appear Proficient in Some Areas	45	43	44	43	43	42	43	44	13,129	42	11,855	41	11,808
Appear to be Proficient	29	31	28	28	29	30	29	27	8,213	27	7,583	24	6,996
COMPUTATION													
Lack Proficiency[2]	39	38	38	35	39	38	39	35	10,532	33	9,370	36	10,454
Appear Proficient in Some Areas	23	26	27	26	25	25	24	26	7,856	27	7,560	25	7,360
Appear to be Proficient	38	36	35	39	36	37	37	39	11,764	40	11,450	39	11,225
ELEMENTARY ALGEBRA													
Lack Proficiency[2]	50	48	47	46	46	44	46	45	13,554	43	12,274	46	13,310
Appear Proficient in Some Areas	36	35	37	38	33	36	33	36	10,872	37	10,573	36	10,521
Appear to be Proficient	14	17	16	16	20	20	21	19	5,725	20	5,533	18	5,208

1. See Appendix D for a description of proficiency categories; GED recipients are excluded from the table.

2. Includes those students not attempting this portion of the test.

TABLE 6A

NJCBSPT Mean Scaled Scores
Statewide Comparison of Recent High School Graduates*
1982- 1991

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Number of Recent High School Graduate	31,964	32,236	28,466	27,291	27,447	28,169	30,883	30,179	28,399	28,905
Percent of Total Test Takers	63%	63%	61%	62%	63%	66%	64%	62%	58%	58%
TOTAL ENGLISH										
Number Completing Test	31,621	31,538	28,401	27,262	27,156	27,805	30,856	30,105	29,360	28,905
Not Attempted	46	192	65	29	291	83	27	74	39	156
Mean Score	165	166	165	165	165	165	165	165	165	164
Standard Deviation	10.3	10.2	10.5	10.5	10.7	10.8	10.7	10.3	10.4	11.0
MATH COMPUTATION										
Number Completing Test	31,856	31,661	28,438	27,274	27,406	27,844	30,859	30,151	28,380	29,039
Not Attempted	108	69	28	17	41	44	24	28	19	22
Mean Score	166	167	167	167	167	168	167	168	168	168
Standard Deviation	9.9	9.6	9.8	9.7	9.8	9.7	9.7	9.2	8.9	9.3
ELEMENTARY ALGEBRA										
Number Completing Test	29,754	29,995	27,134	25,742	26,055	26,902	30,121	29,561	27,958	28,777
Not Attempted	2,210	1,735	1,332	1,549	1,392	986	762	618	441	284
Mean Score	169	169	169	169	170	170	170	170	170	169
Standard Deviation	11.4	11.5	11.3	11.4	11.6	11.5	11.8	11.9	11.6	11.6

*For each year, the most recent high school graduates are those who graduated the spring prior to their enrollment in college.

TABLE 6B

1991 New Jersey High School Graduates*
Verbal Proficiency Categories by High School Program Type

High School Program	n	Lacking Proficiency	Appear Proficient In Some Areas	Appear Proficient
COLLEGE PREP		%	%	%
public	14,937	23	45	32
non-public	3,093	23	43	35
TOTAL	18,030	23	44	33
GENERAL				
public	4,048	59	32	8
non-public	380	46	41	13
TOTAL	4,428	58	33	9
BUS/VOC/IND ARTS				
public	1,686	66	30	5
non-public	62	63	31	6
TOTAL	1,748	65	30	5
GED	87	70	26	4
OTHER	212	70	24	6
SUB TOTAL	24,505			
Out of State, uncoded and/or Limited English	4,400			
All 1991 Graduates	28,905	35	41	24
All NJ H.S. Graduates		34	41	25

*Recent High School Graduates are those who graduated the spring prior to their enrollment in college. Limited English proficient students are excluded, as well as out-of-state graduates.

TABLE 6C

1991 New Jersey High School Graduates*
Computation Proficiency Categories by High School Program Type

High School Program	n	Lacking Proficiency	Appear Proficient In Some Areas	Appear Proficient
COLLEGE PREP		%	%	%
public	14,971	26	28	45
non-public	3,127	39	27	34
TOTAL	18,098	28	28	43
GENERAL				
public	4,058	59	25	16
non-public	387	59	24	18
TOTAL	4,445	59	25	16
BUS/VOC/IND ARTS				
public	1,693	67	22	11
non-public	62	76	18	6
TOTAL	1,755	67	22	11
GED	88	61	23	8
OTHER	212	72	16	12
SUB TOTAL	24,598			
Out of State, uncoded, and/or Limited English	4,307			
All 1991 Graduates	28,905	36	25	39
All NJ H. S. Graduates		37	27	36

*Recent High School Graduates are those who graduated the spring prior to their enrollment in college. Limited English proficient students are excluded, as well as out-of-state graduates.

TABLE 6D

1991 New Jersey High School Graduates*
Elementary Algebra Proficiency Categories by High School Program Type

High School Program	n	Lacking Proficiency	Appear Proficient In Some Areas	Appear Proficient
COLLEGE PREP		%	%	%
public	14,971	31	43	26
non-public	3,127	42	39	19
TOTAL	18,098	33	42	25
GENERAL				
public	4,058	69	25	6
non-public	387	68	28	4
TOTAL	4,445	69	25	5
BUS/VOC/IND ARTS				
public	1,693	83	15	2
non-public	62	87	13	
TOTAL	1,755	83	15	2
GED	88	90	7	3
OTHER	212	78	17	5
SUB TOTAL	24,598			
Out of State, uncoded, and/or Limited English	4,307			
All 1991 Graduates	28,905	46	36	18
All NJ H. S. Graduates		44	37	19

*Recent High School Graduates are those who graduated the spring prior to their enrollment in college. Limited English proficient students are excluded, as well as out-of-state graduates.

TABLE 6E*

Proficiencies of 1991 NJ High School Graduates[1]
By School Category

	ALL PUBLIC 22,707	"SPECIAL NEEDS" PUBLIC 3,487	"NON-SPECIAL NEEDS" PUBLIC 19,220	ALL NON-PUBLIC 3,796	"SPECIAL NEEDS" NON-PUBLIC 911	"NON-SPECIAL NEEDS" NON-PUBLIC 2,886	OTHER[3] 2,152	TOTAL 28,656
VERBAL								
Lack Proficiency[2]	35	57	31	26	38	23	36	34
Some	40	32	42	42	37	44	35	40
Appear Proficient	24	11	27	32	25	34	29	26
COMPUTATION								
Lack Proficiency[2]	37	56	33	42	51	39	38	38
Some	27	24	28	27	23	28	25	27
Appear Proficient	36	20	39	31	26	33	37	36
ELEM. ALBEGRA								
Lack Proficiency[2]	44	59	41	46	56	43	50	45
Some	36	30	37	37	32	39	29	36
Appear Proficient	20	10	21	17	12	18	21	19

*Appendix D for description of proficiency categories.

1. GED recipients excluded.

2. Includes those students not attempting this portion of the test.

3. Uncoded, missing codes, etc.

TABLE 6F

Relationship Between Mathematics Courses Completed in High School and the Computation Proficiency[1] of the Students Tested: 1991 New Jersey Recent High School Graduates Only[2]

Course Category	Total No.	Lack Proficiency		Appear Proficient In Some Areas		Appear to be Proficient	
		No.	%	No.	%	No.	%
1. Business Math or General Math	1380	1249	91	112	8	19	1
2. Algebra I	1746	1311	75	355	20	80	5
3. Algebra I & Geometry	2473	1615	65	681	28	177	7
4. Algebra I & II	610	402	66	159	26	49	8
5. Algebra I, Geometry & Algebra II	7400	3113	42	2604	35	1683	23
6. Trigonometry (No Senior Math)	4835	806	17	1510	31	2519	52
7. Senior Math (No Trigonometry)	1013	170	17	351	35	492	49
8. Algebra I & II, Geometry & Trigonometry	1394	130	9	338	24	926	66
9. Calculus (No Senior Math)	2610	100	4	352	13	2158	83
10. Senior Math & Calculus	553	10	2	43	8	500	90
Overall	24,014	8,906	37	6,505	27	8,603	36

1. See Appendix D for a description of proficiency categories.

2. Recent high school graduates are those who graduated the spring prior to their enrollment in college. Limited-English-Proficient students are excluded.

TABLE 6G

Relationship Between Mathematics Courses Completed in High School and the Elementary Algebra Proficiency[1] of the Students Tested: 1991 New Jersey Recent High School Graduates Only[2]

Course Category	Total No.	Lack Proficiency		Appear Proficient In Some Areas		Appear to be Proficient	
		No.	%	No.	%	No.	%
1. Business Math or General Math	1380	1359	98	21	2	0	0
2. Algebra I	1746	1646	94	100	6	0	0
3. Algebra I & Geometry	2473	2199	89	270	11	4	0
4. Algebra I & II	610	440	72	161	26	9	1
5. Algebra I, Geometry & Algebra II	7400	3596	49	3420	46	384	5
6. Trigonometry (No Senior Math)	4835	813	17	2765	57	1239	26
7. Senior Math (No Trigonometry)	1013	209	21	573	57	231	23
8. Algebra I & II, Geometry & Trigonometry	1394	118	8	682	49	594	43
9. Calculus (No Senior Math)	2610	93	4	735	28	1782	68
10. Senior Math & Calculus	553	13	2	107	19	433	78
Overall	24,014	10,504	44	8,834	37	4,676	19

1. See Appendix D for a description of proficiency categories.

2. Recent high school graduates are those who graduated the spring prior to their enrollment in college. Limited-English-Proficient students are excluded.

TABLE 7*

Test Results Of Non-Recent Graduates[1] By Year Of Graduation

	1990		1989		Pre-1989 Grads		Did Not Graduate		Total	
	#	%	#	%	#	%	#	%	#	%
VERBAL										
Lack Proficiency	1,660	46	969	50	5,529	44	989	72	10,361	50
Appear Proficient in Some Areas	1,301	36	656	34	4,416	35	233	17	7,037	34
Appear to be Proficient	544	15	280	14	2,326	19	125	9	3,452	17
COMPUTATION										
Lack Proficiency	1,942	54	1,130	58	7,614	61	1,006	74	13,229	62
Appear Proficient in Some Areas	912	26	478	25	2,676	21	191	14	4,578	21
Appear to be Proficient	719	20	332	17	2,210	18	170	12	3,692	17
ELEMENTARY ALGEBRA										
Lack Proficiency	2,416	68	1,418	73	1,030	82	1,129	83	16,943	79
Appear Proficienct in Some Areas	886	25	397	20	1,636	13	138	10	3,384	16
Appear to be Proficient	271	8	125	6	555	4	100	7	1,172	6

*Includes those who may not have enrolled in college after being tested.

1. "Non-recent" graduates are students whose diploma was received prior to this year of testing.

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TABLE 8

Proficiencies by Gender
and College Sector

	MALE 22,066					FEMALE 27,682				
	Statewide	County	State	Rutgers	NJIT	Statewide	County	State	Rutgers	NJIT
VERBAL										
Lack Proficiency	42	54	24	8	22	37	47	19	7	25
Some Proficiency	38	36	46	40	47	40	39	45	36	40
Appear Proficient	20	10	30	52	31	23	15	36	57	34
COMPUTATION										
Lack Proficiency	38	50	21	5	6	51	63	28	10	6
Some Proficiency	24	26	25	12	17	23	22	28	20	20
Appear Proficient	38	24	54	83	77	26	14	44	70	74
ELEM. ALGEBRA										
Lack Proficiency	55	72	34	7	5	63	79	35	12	4
Some Proficiency	30	23	46	38	48	26	18	44	42	40
Appear Proficient	15	5	20	55	48	11	3	21	46	56

TABLE 8A

Proficiencies in Elementary Algebra by Gender and
High School Mathematics Courses Completed
for 1991 Graduates

ALGEBRA I, II & GEOMETRY

	Men (3095) %	Women (4044) %
Lack Proficiency	49	47
Proficient in Some Areas	46	47
Appear Proficient	5	5

ALBEGRA I, II, GEOMETRY & SENIOR MATH

	Men (471) %	Women (517) %
Lack Proficiency	23	18
Proficient in Some Areas	56	57
Appear Proficient	21	25

ALBEGRA I, II, GEOMETRY, TRIGONOMETRY & SENIOR MATH

	Men (717) %	Women (649) %
Lack Proficiency	10	7
Proficient in Some Areas	50	47
Appear Proficient	41	46

ALBEGRA I, II, GEOMETRY, TRIGONOMETRY & CALCULUS

	Men (1279) %	Women (1304) %
Lack Proficiency	4	3
Proficient in Some Areas	28	28
Appear Proficient	68	69

TABLE 9

Ten Year History of High School Mathematics Courses Taken in High School

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MATH COURSES TAKEN IN HIGH SCHOOL[1]										
General Math	36	37	36	33	37	37	46	46	49	50
Business Math	17	17	16	16	17	17	20	19	19	20
Algebra 1	71	72	71	69	75	77	80	78	77	77
Algebra 2	55	56	56	56	59	63	62	61	60	59
Geometry	63	65	64	64	68	71	71	69	68	67
Trigonometry	26	27	27	28	30	33	31	31	29	29
Senior Academic	10	10	10	10	10	10	10	10	9	10
Calculus	8	9	9	10	10	11	11	11	10	10
No Response	n/a	2	3	6	5	2	2	3	3	4

1. Percentages exceed 100 since students may take more than one math course in high school.

TABLE 10

Background Data (in percent) of Students Tested by Sector, 1991

	State* (51,097)	County Colleges (33,506)	State Colleges (8,186)	Rutgers (5,482)	NJIT (670)	Recent High School Grads (29,061)	Non-Recent H.S. Grads (21,499)
GENDER							
Male	43	44	36	48	81	46	40
Female	54	55	52	52	17	51	60
No Response	3	1	12	0	2	3	—
ENROLLMENT STATUS							
Full-Time	73	65	83	96	96	92	47
Part-Time	24	32	13	2	3	8	45
No Response	3	3	3	2	1	—	8
YEAR OF HIGH SCHOOL GRADUATION							
1991	58	46	76	91	86	100	—
1990	7	9	5	2	4	—	17
1989	4	5	3	1	2	—	9
Prior to 1989	24	33	12	4	7	—	58
Did Not Graduate	3	4	0	0	0	—	6
No Response	4	4	4	2	1	—	—
HIGH SCHOOL PROGRAM							
Academic	57	46	74	89	80	73	36
General	23	28	15	7	14	19	29
Career	11	15	5	1	4	7	17
GED	4	5	2	0	0	0	7
Other	2	2	1	0	1	1	3
No Response	4	3	4	2	1	0	—
UNDERSTAND ENGLISH BETTER THAN ANY OTHER LANGUAGE							
Yes	89	90	90	92	89	93	85
No	6	6	6	6	9	6	7
No Response	5	4	5	3	2	1	9

*Students from the participating independent colleges are included in statewide totals.

TABLE 10A

Background Data (in percent) of Students Tested by Sector, 1991

	State (51,097)	County Colleges (33,506)	State Colleges (8,186)	Rutgers (5,482)	NJIT (670)	Recent High School Grads (29,061)	Non-Recent H.S. Grads (21,499)
SPEAK LANGUAGE OTHER THAN ENGLISH AT HOME							
Yes	20	17	20	30	49	21	19
No	77	80	77	68	50	80	74
No Response	3	3	3	2	1	0	8
ETHNICITY							
Asian	5	4	4	15	26	6	5
Black	15	16	14	10	12	12	19
Hispanic	9	8	11	10	13	9	8
White	62	64	64	57	43	68	54
Other	3	3	2	3	4	2	3
No Response	7	6	6	5	3	3	—
ESL PROGRAM							
Completed	4	5	2	3	8	4	5
Student Enrolled	1	2	1	0	4	1	2
Not Needed	89	88	91	94	85	93	83
No Response	6	6	6	3	3	3	11
MATH COURSES TAKEN IN HIGH SCHOOL*							
General Math	50	61	33	24	31	38	66
Business Math	20	25	12	7	10	15	26
Algebra 1	77	74	86	83	88	86	64
Algebra 2	59	46	80	93	92	75	38
Geomotry	67	57	86	95	94	83	46
Trigonometry	29	16	41	74	79	39	16
Senior Academic	10	5	14	24	37	13	5
Calculus	10	4	13	39	41	14	6
No Response	4	3	4	2	1	0	—
WANT HELP TO IMPROVE							
Math	40	44	37	29	27	37	45
Reading	12	13	12	12	19	11	14
Study Habits	40	40	41	36	43	42	36
Writing	26	24	27	32	38	25	27
No Response	18	16	20	25	15	17	—

*Percentages exceed 100 since students may take more than one math course in high school.

TABLE 11

Background Data (in percent) of Students Tested Statewide, 1982-1991

SEX	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Male	44	45	44	44	44	44	43	43	43	43
Female	54	54	54	54	54	54	56	53	52	54
No Response	2	1	2	2	2	2	1	5	6	3
ENROLLMENT STATUS										
Full-Time	77	78	75	74	74	77	75	74	73	73
Part-Time	21	21	22	22	22	21	23	23	24	24
No Response	2	4	2	3	4	2	2	3	3	3
HIGH SCHOOL PROGRAM										
Academic	61	62	61	62	61	63	62	60	58	57
General	18	18	19	18	19	19	20	21	23	23
Career	14	14	13	13	12	11	12	12	12	11
GED	4	4	3	3	3	3	3	3	3	4
Other	1	1	1	1	1	1	1	2	2	2
No Response	2	2	3	3	4	2	2	3	3	4
UNDERSTAND ENGLISH BETTER THAN ANY OTHER LANGUAGE										
Yes	n/a	92	91	88	90	92	92	91	90	89
No	n/a	5	5	5	5	5	5	6	6	6
No Response	n/a	3	4	7	5	3	3	4	4	5
SPEAK LANGUAGE OTHER THAN ENGLISH AT HOME										
Yes	n/a	15	15	16	15	16	17	17	19	20
No	n/a	84	82	79	81	82	81	80	78	77
No Response	n/a	1	2	5	4	2	2	3	3	3
ESL PROGRAM										
Completed	n/a	n/a	n/a	n/a	n/a	n/a	n/a	3	3	4
Still Enrolled	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	2	1
Not Needed	n/a	n/a	n/a	n/a	n/a	n/a	n/a	90	89	89
No Response	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	6	6

APPENDIX A

Description of the New Jersey College Basic Skills Placement Test

One purpose of the NJCBSPT is to help determine which students admitted to college need remedial instruction in certain basic skills; that is, the test was designed to discover which of the entering students do not have the level of skills generally expected of college freshmen and deemed necessary for successful completion of their academic programs. Thus, the basic skills measured by the test are defined not as skills necessary to survive in the world (e.g., filling out applications, reading directions on medicine bottles, or the like) but as skills needed to read college textbooks, to write papers for classes, to solve computational and algebraic problems in classes and, indeed, to compete successfully in a technological society.

The portions of the NJCBSPT dealing with verbal and mathematical skills yield the following scores:

1. Reading Comprehension.
2. Sentence Sense.
3. Essay.
4. Composition, a composite score based on the Sentence Sense and Essay sections.
5. Total English score, a composite score based on the Reading Comprehension, Sentence Sense, and Essay sections.
6. Computation.
7. Elementary Algebra.

A more detailed explanation of the test can be found in *Interpreting Scores on the New Jersey College Basic Skills Placement Test*. Similarly, further information concerning the Essay and the mathematics sections of the test can be found in *Scoring the Essays* and *Interpreting Mathematics Scores on the New Jersey College Basic Skills Placement Test*, respectively. All booklets are available from the Department of Higher Education (see inside back cover).

Reading Comprehension (47 questions, including 7 pre-test questions, 50 minutes)

The Reading Comprehension section measures students' ability to understand a written text, to extract the main idea from the text, and to draw appropriate inferences from it. Most, but not all, of the questions testing these skills are related to passages printed in the test book. The passages cover a variety of subjects and represent a variety of writing purposes and styles.

Students taking the test are expected to read the passages carefully and to know what the text actually says. Close reading and attention to detail are expected, as is attention to tone. Merely identifying or confirming facts contained in a passage is not emphasized. Instead, students are expected to be able to generalize about the ideas in the passage and the method of their presentation. They are also expected to be able to identify ideas found in the passage when those ideas are stated in different words and to understand and identify the assumptions made by the author and the implications of the text.

Sentence Sense (40 questions, including 5 pre-test questions, 35 minutes)

The Sentence Sense section uses two kinds of multiple-choice questions. The first requires students to identify faults in sentences and make appropriate corrections. The second asks students to rewrite sentences, much as they would do when editing their own writing.

The problems presented to the student for correction are concerned mainly with the structure and logic of sentences, not with grammar or punctuation. Questions deal with expressing ideas clearly and accurately, appropriately coordinating or subordinating ideas within sentences, and recognizing complete sentences. The types of questions used ask students either to identify problems and correct errors in sentences or to recast sentences to change structure or emphasis - tasks they might perform when they themselves write.

Essay (20 minutes)

The Essay measures whether a student can write unified paragraphs, can organize ideas, can develop a logical argument, can provide specific examples, can use complete

sentences, can spell, can punctuate, can interest the reader, can maintain a consistent tone, can express ideas precisely or can do a host of other things that go into writing a good essay.

Each student's essay is holistically scored by two faculty readers. Examples of "good," "mediocre," and "weak" essays are provided to students in the *Information Bulletin*.

Computation (35 questions, including 5 pre-test questions, 40 minutes)

The Computation section measures the ability to perform basic arithmetic operations and to apply the operations to the solution of problems that involve fundamental arithmetic concepts. The questions cover operations with whole numbers, operations with fractions, operations with decimals and percents, and arithmetic reasoning.

Elementary Algebra (35 questions, including 5 pre-test questions, 40 minutes)

The Elementary Algebra section measures the ability to perform basic algebraic operations and to apply the operations to the solution of problems that involve elementary algebraic concepts. It tests operations with real numbers, operations with algebraic expressions, elementary understanding of graphs of equations, and the ability to solve equations, inequalities, and word problems.

Changes in the Test

Since 1978, the NJCBSPT has undergone two significant revisions. For the first four years, a section on "Logical Relations" was included in the test. In 1982, this section was removed and several of the item types were embedded into the Reading Comprehension and Sentence Sense (formerly, Sentence Structure) sections.

In 1985, the Reading Comprehension section was shortened by 10 items in order to compensate for an observed "speededness" effect. For the NJCBSPT, a section is considered to be "speeded" if fewer than 90% of those sitting for the test reach the last item.

INFORMATION BULLETIN 1991-92

NEW JERSEY COLLEGE BASIC SKILLS PLACEMENT TEST

Purpose of the Test

Now that you have been admitted to a New Jersey public college or participating private college, you will need to take the New Jersey College Basic Skills Placement Test (NJCBSPT). This test is designed to provide information about your skills in the English language and in mathematics. The test results will be used, along with other information, to place you in the courses and sections appropriate to your level of preparation. In some cases those may be noncredit, developmental courses.

The test measures your skills in reading, writing, computation, and elementary algebra. The test administration requires 3 to 4 hours. With the exception of the 20-minute essay section, the test is made up entirely of multiple-choice questions.

El New Jersey College Basic Skills Placement Test provee a las universidades informacion de sus destrezas lingüisticas y matemáticas.

Los resultados de esta prueba serán utilizados para recomendar su matricula en los cursos apropriados. En algunos casos estos cursos recomendados pueden ser a nivel básico.

No deberán examinarse los estudiantes que estén matriculados en programas bilingües o de inglés como segunda lengua hasta no terminar este curso de estudios. Para su información hay una versión en Español de los exámenes de calculación y álgebra elemental. Preguntas sobre los requisitos de este examen, deben dirigirse al Supervisor de Exámenes de su universidad.

Who Must Take the Test

The New Jersey Board of Higher Education requires that the following students take the test:

- full-time and part-time freshmen entering New Jersey public colleges (some private colleges have also chosen to participate in the testing program);
- students who have not already taken the test but who register for a course that would result in the accumulation of 12 or more credits; and
- full-time and part-time transfer students who have not received transfer credit for freshman composition and mathematics.

However an institution may require additional categories of students to be tested. Students will be tested only *after* they have been admitted to a college. Students who already hold a bachelor's degree need not be tested. Students enrolled in a bilingual or English as a Second Language (ESL) program should not be tested until they have completed such a program. If you have any questions about taking this test, call or write the Test Administrator at your college.

Where and When the Test Is Given

The NJCBSPT is given at all New Jersey public colleges and participating private colleges. Your college will notify you where on campus the test will be administered and when you are to take it. Each college schedules the date and time for administering the test to its students.

Special Arrangements for Students with Disabilities

If you have a learning or physical disability that would prevent you from taking the test under standard conditions, you may request special accommodations and arrangements to take it on either a regularly scheduled test date or at a specially scheduled administration. No charge is made for these arrangements. For details, please contact the Test Administrator at your college.

What to Take with You on the Test Day:

1. **Your Social Security Number**
2. **Several No. 2 lead pencils with erasers**
3. **A blue or black ballpoint pen for writing the essay**

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Testing Regulations

No books, dictionaries, calculators, or papers of any kind are allowed in the test room. Anyone who gives or receives help during the test, uses notes or books or papers of any kind, or removes test materials or notes from the room will not be permitted to continue the test. The college will invalidate any test score if there is any reason to question its validity.

Test Scores

This test yields scores in the following areas: Essay, Reading Comprehension, Sentence Sense, Composition, Total English, Computation, and Elementary Algebra. Your test scores will be reported to your college, and your college will determine the procedures for communicating information about the test results.

Confidentiality

Data about you will not be used for other than counseling and placement purposes without your permission. If the data are used for research purposes, special procedures will be used to keep your identity confidential. If you have any questions about confidentiality, see your college's Test Administrator.

Questions and Answers about the NJCBSPT

Q. Why am I being asked to take this test?

A. The results of this test will help place you in courses for which you are best prepared. **Therefore, this test should be taken seriously.**

Q. Is this an admissions test?

A. No. The test has nothing to do with your being admitted to college. In fact, you will not take the test until *after* you have been admitted.

Q. I have not yet been admitted. Can I still take the test?

A. No. You will have to wait until you've been admitted to college.

Q. I have taken courses at another college. Do I need to take this test?

A. All students who have not taken this test must do so, unless they have received transfer credit for freshman composition and mathematics. Each college sets its own policies for testing transfer students.

Q. I have taken other standardized tests for credit or placement. Do I need to take this test, too?

A. Yes. The test is designed to give you and your college advisors information different from that provided by other tests.

Q. I am not sure whether or not I am required to take the test. What should I do?

A. The NJCBSPT Administrator of your college will be able to answer your question.

Q. Why are you testing English?

A. Reading and writing skills are essential for success in college. You must read well enough to understand your college textbooks and write well enough to prepare term papers and answer questions on essay tests.

Q. Why are you testing mathematics?

A. Certain quantitative skills and mathematical concepts are necessary for success in many phases of college-level work. These are the skills and concepts the test measures.

Q. How do I prepare for the test?

A. While the goal of the test is to assess your skills accumulated over time in reading, writing, and mathematics, a review of mathematics would help refresh those skills, particularly if you have not used them in a while.

Q. Suppose I don't do well on the test?

A. Your college will interpret the results of the test and determine which courses you are prepared to take. You may be required to take one or more developmental courses.

Q. What are developmental courses?

A. Developmental courses will help you raise the level of your skills so that you can increase your chances for success in college. These courses do not earn credit toward graduation. They are prerequisites for taking college-level courses.

Q. I have completed high school. Shouldn't I be ready for college-level work?

A. Probably. But, if you have not had very much practice in writing essays, or in careful reading, or in basic mathematics, you still might benefit from special instruction.

Q. Will I have to pay a fee to take the test?

A. No. The State of New Jersey has provided funds for the development and the administration of the test.

Q. Where do I take the test?

A. Your college's Test Administrator will contact you about the place and time of testing.

Q. How do I find out how I did on the test?

A. Your college will inform you of the results.

Description of the Test

The first part of the test measures your skills in certain areas of English. It consists of three sections: Essay, Reading Comprehension, and Sentence Sense. These sections of the test are designed to measure your reading and writing skills to determine if you are prepared to *begin* regular college courses.

The second part of the test measures your quantitative and elementary algebra skills. It consists of two sections: Computation and Elementary Algebra.

The following paragraphs will tell you more about the English and mathematics sections of the test.

The Essay. You will be given 20 minutes to write an essay on an assigned topic. In general, your essay will be scored on how well you phrase your ideas and organize them, and whether you use specific examples to support your ideas. You are expected to follow the conventions of standard written English.

Reading Comprehension. 50 minutes, 47 questions. This section of the test measures how well you understand what you read. The questions will be based on information contained in the passages.

Sentence Sense. 35 minutes, 40 questions. This section of the test measures how much you know about the way parts of a sentence fit together and about the ways to make the meaning of a sentence clear.

Computation. 40 minutes, 35 questions. This section of the test measures your ability to perform basic arithmetic operations and to solve problems that involve fundamental arithmetic concepts. The topics include whole numbers, fractions, decimals, percents, and applications using arithmetic.

Elementary Algebra. 40 minutes, 35 questions. This section of the test measures your ability to perform basic algebraic operations and to solve problems that involve elementary algebraic concepts. The topics include operations with real numbers, polynomials, algebraic fractions and square root expressions; the use of the rules of exponents; factoring; solving equations, inequalities, and systems of equations; graphs of linear equations; and solving word problems.

Many different kinds of multiple-choice questions are used in the test. A sample of these questions and of an essay topic follows. The answers to the multiple-choice questions appear on page 8.

The Essay

You will have 20 minutes to plan and write an essay on a topic like the one at the top of the next column. Read the topic carefully before you begin writing. This essay is assigned to give you an opportunity to show how well you can write. You should, therefore, take care to express your thoughts on the topic clearly and effectively. **How well you write is much more important than how much you write,** but to cover the topic adequately you may want to write more than one paragraph. Be specific.

You may want to write an essay on this sample topic for practice.

Young people often want the power and privileges of older people, whereas older people often feel that childhood and youth are the happiest times of life.

Explain some of the advantages or disadvantages of being the age that you are now. Be specific.

Sample Responses

Good Response:

As a young woman of eighteen, I feel very fortunate to be young enough to enjoy the benefits of my youth and old enough to be wise in my decisions. Being young allows me to be more carefree than my parents because I have fewer responsibilities weighing my life down. I am old enough to choose my own friends and recreations, and I have a driver's license to permit me additional freedom. My parents trust my decisions as mature and responsible, which is very supportive. I am recognized by them as an adult, whereas my younger sister is slightly more restricted. I have also experienced the priviledge of voting in a local ellection, which fulfills a sense of duty for me. My friends feel comfortable having someone to depend on, a responsibility I could not have held up to as well at fourteen. This expansion of my life experiences due to my age status is preparing me for my future by making me a more rounded person.

Being eighteen has its drawbacks. I am not allowed to buy alcohol in the state of New Jersey. This is not a major defeat, but to function in the social circles of adult life, one must socially drink. Because I am still a student, my age is overruled by my educational status. My parents, however supportive, still view me as a child in some respects because I still live in their house. I have not had the full responsibilites of an adult as yet, and the changes seem slow in coming.

In contrast to this, the life of a child of eight or nine sometimes seems much easier. It is sometimes difficult not to be enviable of their carefree lives. I feel that being eighteen is a rich experience, in view of all of its advantages and disadvantages.

The 20-minute writing sample is essentially a first draft. Despite the errors in diction and spelling, the writer obviously has control of the language: the ideas are generally clearly stated; they are organized; they are pertinent. The sentence structure has some variety. The errors in spelling are not frequent. The writer's major weakness is in the inexact use of words. Even so, the total piece of writing is strong enough to justify a good rating.

Mediocre Response:

The advantages of being eighteen are numerous. First of all, it is a time when you are no longer considered a child. The majority of eighteen year olders are heading off to college. This is a new beginning because no longer will people do things for you. Now you must do it for yourself.

New ideas are developed by oneself the emergence of self-discipline and being independant are very important.

One of the best advantages is being on your own and doing what you want to do. This includes good studying habits, staying in shape and enjoying the night life.

I find that the disadvantages are very few. The best one is leaving all your high-school friends behind. The same people you got along with for four years.

Another disadvantage is unavailability of a full-time summer job. this would help cut the high cost of college tremendously.

Finally the lack of respect for not living up to your fullest expectations such as top honors in high school and all-country in basketball.

In closing I would like to say that being eighteen is the greatest time of life.

This sample is somewhat weaker. Some sentences are complete, indicating control of sentence structure, while others are fragments. There is some organization to the ideas, but that organization is not consistent. Some of the statements are clear; some are murky. The sentences are not very sophisticated in structure, but neither are they invariably simple. The writing is definitely in the middle range.

Weak Response:

If your in a family with older sisters and brothers you will learn. The older kids get more priveleges, to go out later, and not many questions asked of where they were. Young people have to be in earlier and account for everywhere they have been, Older people think childhood is better because they don't have the worries or expences as an adult which in turn makes their life happier. At the age I am at now respoucibility is greater than ever. Every step I take builds up my tomorrow. And every move I make counts either against it or for it. But now my time to make mistakes and learn how to improve them tomorrow.

This writing sample is definitely weak. The sample lacks organization; not even a topic sentence appears. The writer's difficulties with sentence structure, for example, make some of the ideas hard for the reader to comprehend on first reading. Even though the writer does have ideas and those ideas are all relevant to the topic, the writing is weak and the sample deserves a low score.

Reading Comprehension

Directions:

For each of the questions in this section, you are to select from the four suggested answers the one that is best and fill in the corresponding oval on your answer sheet.

Questions will test how well you understand certain passages. Answer these questions on the basis of what is stated or implied in the passage.

After the following passage, there are sample questions followed by explanations of the best answers.

Questions 1-4

[1]There is a great deal of communication between Chinese teachers and parents, especially when the younger children move into new school settings. [2]Some communication takes place informally when parents walk young children to the school or pick them up, but there are a number of other more formal modes of communication, usually initiated by the schools. [3]These include meetings for parents, most often held early in the school year or at the end of the year, visits from teachers to the homes of the students, and small notebooks that pass back and forth between school and home, referred to as "communication books" or "connection notebooks." [4]The exchange between school and home in China, apparently so much more fluid and continuous than that in the United States, may be the result of the more stable and tighter organization of Chinese neighborhoods. [5]Schools generally seem to be less isolated from homes in China than they are in the West.

1. The main idea in this passage is that

   (A) schools in China are better organized than are schools in the United States
   (B) communication between teachers and parents in the United States is poor
   (C) Chinese parents and teachers communicate frequently with each other
   (D) communication between parents and teachers eliminates certain problems in China's schools

The first sentence of the paragraph indicates what the paragraph is about, and the idea of that first sentence is contained in choice (C). Organization of schools and problems in the schools are not mentioned in the paragraph, and (B) may be implied in the passage but it is not the main idea. Students who did not answer this question correctly were clearly not reading the passage carefully.

2. According to this passage, most informal communication between Chinese parents and teachers occurs

   (A) at the beginning and end of a young child's school day
   (B) when a child is doing well enough to be promoted
   (C) when parents voluntarily come to the school to inquire about the child's progress
   (D) when parents request that the teacher visit them at home

   The answer to this question is contained in the second sentence of the paragraph. Choice (A) restates the information provided there.

3. The author suggests that the school-family connection in China is

   (A) similar in most aspects to what it is in the United States
   (B) supported by neighborhood organizations
   (C) stronger than it is in the United States
   (D) usually controlled by the parents

   The inference is based on the last two sentences. To arrive at (C) the student needs to understand the implications of "more fluid and continuous" and "less isolated from."

4. What is the function of sentence 5 in the passage?

   (A) It clarifies and concludes ideas presented in sentence 4.
   (B) It introduces an implied comparison.
   (C) It provides an exception to a point made in sentence 4.
   (D) It introduces a new idea.

   Sentence 5 continues the comparison between parent-teacher communication in China and parent-teacher communication in the United States, restating the comparison directly and briefly. Sentence 5 therefore functions in relation to sentence 4 as described in choice (A).

The following passage is followed by sample questions without explanations.

Questions 5-7

[1]In at least one sense, the years had been kind to Rachel Isum Robinson, the wife of the first Black baseball player to be a member of a major league team. [2]She remained a handsome woman, with soft, unlined skin. [3]Escorting my wife and me into her living room, she walked with elegance and there was a warmth to her manner, and the two, elegance and warmth, blended into graciousness. [4]"Won't you sit down?" [5]On one side of the spacious room, a window wall overlooked a bright lawn and water. [6]Opposite, gray stone arched above the fireplace, no visible mortar interrupted the flow of stone. [7]"The builder," Rachel said, "was marvelous. [8]He meant this place to be a monument; of course, we have never been sure whether for us or for him." [9]She climbed two carpeted stairs into a dining alcove and returned with refreshments. [10]Only then did we start to talk. [11]"One thing about my background in California was that I was brought up to be as ladylike as possible. [12]I was taught not to be aggressive. [13]And then, marrying Jack, I was in the middle of a struggle where — well, without aggressive behavior, it would have failed. [14]There was an aggressiveness to Jack's whole career in baseball. [15]It was a kind of objection to the White society." [16]"A very mild objection." [17]Treading softly, Jackie Robinson had entered his living room. [18]"Go on, go on," he said quietly.

5. The main purpose of the passage is to

   (A) suggest the close relationship between the Robinsons
   (B) suggest Rachel Robinson's character
   (C) analyze Rachel Robinson's motives
   (D) analyze the effects of the Robinsons' struggle

6. The first sentence suggests that Rachel Robinson

   (A) works hard to forget the past
   (B) dislikes intrusion into her life
   (C) has not led a carefree life
   (D) works hard to control her emotions

7. The author's attitude toward Rachel Robinson is one of

   (A) grudging respect
   (B) reserved judgment
   (C) admiration
   (D) neutrality

Sentence Sense

The Sentence Sense section uses two kinds of multiple-choice questions. The first requires the students to identify faults in sentences and make appropriate corrections. The second asks students to rewrite sentences, much as they would do when editing their own writing.

The problems presented to the student for correction are concerned mainly with the structure and logic of sentences, not with problems of subject-verb agreement and the like. Questions deal with expressing ideas clearly and accurately, appropriately coordinating or subordinating ideas within sentences, and recognizing complete sentences. The types of questions used ask students either to identify and correct problems in sentences or to recast sentences to change structure or emphasis—tasks they might perform when they write themselves.

Examples of the types of multiple-choice questions used in the Sentence Sense section follow.

Select the best version of the underlined part of the sentence. Choice (A) is the same as the original sentence. If you think the original sentence is best, choose answer (A).

8. The record is held by Andrea, it is in the hundred-yard dash.

(A) The record is held by Andrea, it is in the hundred-yard dash.
(B) Andrea holds the record in the hundred-yard dash.
(C) The record in the hundred-yard dash being held by Andrea.
(D) The hundred-yard dash record, which is held by Andrea.

This question asks the student to recognize first that the original sentence neither fits the traditional definition of a complete sentence nor presents the ideas in it in an appropriate way. Choice (B), which is the correct response, eliminates the comma fault and conveys the required information briefly and clearly.

9. Jenny's Cinderella costume was more elaborate than Henry, who wore a ghost costume.

(A) Henry, who wore a ghost costume.
(B) Henry in a ghost costume.
(C) Henry's ghost costume.
(D) Henry's who wore a ghost costume.

This question presents a problem in logic in that the original sentence compares a costume to a person. The sense of the sentence requires that two costumes be compared. Choice (C) is the only one that provides that comparison.

In the following questions, you are going to be asked to rewrite sentences in your head. You will be told exactly how to begin your new sentence. Keep in mind that your new sentence should be well written and should have the same meaning as the sentence given you.

10. George saw no familiar faces when he looked around the room.

Rewrite, beginning with

Looking around the room, . . .

The next words will be

(A) George saw no familiar faces
(B) no familiar faces could be seen
(C) and seeing no familiar faces
(D) then George saw no familiar faces

To answer this question, the student must remember that George is looking around the room and that, therefore, *George* must be the word to follow the comma in the new sentence. Only by using *George* can the student avoid creating a sentence that has a dangling modifier.

11. If she had not agreed to work late this evening, she would be able to go shopping for Eleanor's birthday present.

Rewrite, beginning with

She cannot go shopping for Eleanor's birthday present. . .

The next words will be

(A) since her agreement
(B) even though she agreed
(C) without first agreeing
(D) because she has agreed

The sense of the original sentence is kept only when (D) is used to form the new sentence: She cannot go shopping for Eleanor's birthday present because she has agreed to work late this evening.

Computation

Directions: Solve each problem and indicate your answer choice in the corresponding oval on the separate answer sheet. You may use any blank space in this section for scratch work. However, all answers **must** be marked on the answer sheet.

1. Of the following which is closest to: $\sqrt{4{,}000}$?

(A) 40 (B) 60 (C) 200 (D) 2,000

2. Which of the following is greatest?

(A) $\frac{2}{3}$ (B) $\frac{5}{12}$ (C) $\frac{1}{2}$ (D) $\frac{3}{8}$

3. $\frac{3}{4} - \frac{1}{2} + \frac{2}{5} =$

(A) $\frac{3}{20}$ (B) $\frac{4}{11}$ (C) $\frac{4}{7}$ (D) $\frac{13}{20}$

4. $23.5 \times 3.04 =$

(A) 714.4 (B) 79.9 (C) 71.44 (D) 7.99

5. 16 is what percent of 80?

(A) 5% (B) 12.8% (C) 20% (D) 64%

6. Bill purchased a car and made a down payment of \$560. If the down payment was $\frac{1}{5}$ of the purchase price, what was the purchase price?

(A) \$112 (B) \$2,240 (C) \$2,800 (D) \$4,480

Elementary Algebra

Directions: Solve each problem and indicate your answer choice in the corresponding oval on the separate answer sheet. You may use any blank space in this section for scratch work. However, all answers **must** be marked on the answer sheet.

7. If $x = 4$ and $y = -2$, then $x^2y - xy^2 =$

(A) 48 (B) 16 (C) -16 (D) -48

8. $\sqrt{18} + \sqrt{8} =$

(A) $\sqrt{26}$ (B) $5\sqrt{2}$ (C) 10 (D) 12

9. If $2x + 3(x - 2) = 30$, then $x =$

(A) $\frac{5}{36}$ (B) $\frac{24}{5}$ (C) $\frac{32}{5}$ (D) $\frac{36}{5}$

10. One factor of $3a^2 - 13a - 10$ is

(A) $(3a + 2)$ (B) $(3a - 5)$ (C) $(a + 2)$ (D) $(a + 5)$

11. If A represents the number of apples purchased at 15 cents each and B represents the number of bananas purchased at 10 cents each, which of the following represents the total purchase price in cents?

(A) $25AB$ (B) $25(A + B)$ (C) $15A + 10B$ (D) $A + B$

12. $\frac{5}{a} + \frac{7}{b} =$

(A) $\frac{12}{a + b}$ (B) $\frac{12}{ab}$ (C) $\frac{5b + 7a}{a + b}$ (D) $\frac{5b + 7a}{ab}$

ETS will keep a record of your NJCBSPT scores for three years after the testing date. If you have any questions regarding the test administration, test questions, or other concerns about the NJCBSPT testing program, you may contact the NJCBSPT Program Direction Office at Educational Testing Service at (609) 734-1274.

Key to Sample Questions

ENGLISH		MATHEMATICS	
1. C	7. C	1. B	7. D
2. A	8. B	2. A	8. B
3. C	9. C	3. D	9. D
4. A	10. A	4. C	10. A
5. B	11. D	5. C	11. C
6. C		6. C	12. D

Albert W. Merck
Chair, Board of Higher Education

Edward D. Goldberg
Chancellor of Higher Education

Anthony D. Lutkus, *Director*
New Jersey Basic Skills Assessment Program

BASIC SKILLS COUNCIL*

Robert Lynch, *Chair*
New Jersey Institute of Technology

Jose Adames
Kean College of New Jersey

Kwaku Armah
Department of Higher Education

Madan Capoor
Middlesex County College

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Rutgers University

Anthony D. Lutkus
Department of Higher Education

Dorothy Minkoff
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Albert Porter
Mercer County Community College

Raymond Smith
Rutgers University

Kurt Spellmeyer
Rutgers University

Manya Ungar
National Congress of Parents and Teachers

Program Staff
Faye Frieson
Dennis Levy
Helene Scarlett

Nina Jemmott
Ex Officio, College Outcomes Evaluation Council Representative
New Jersey Institute of Technology

*The Basic Skills Council is an advisory group that oversees test development, administration, and policy for the New Jersey College Basic Skills Placement Test.

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APPENDIX B

Participating Independent and Proprietary Institutions

The Berkeley College of Business

Caldwell College

Centenary College

DeVry Technical Institute

Fairleigh Dickinson University--
Madison, Rutherford, & Teaneck Campuses

Felician College

Georgian Court College

Katharine Gibbs School

Seton Hall University

Upsala College

Westminster Choir College

APPENDIX C

NJCBSPT Year to Year Score Equating

Raw scores for the NJCBSPT are computed simply by adding the points awarded for each correct answer. However, the official scores for the NJCBSPT are reported as scaled scores which are derived by applying a conversion formula to the raw scores. The reason for reporting scaled scores is that they can be made comparable across different years, since a new form of the test is developed annually.

Equating is the statistical process that makes it possible to report scaled scores that have essentially the same meaning for different forms of a test. Scores on each new form of the NJCBSPT are equated to scores on the previous form. These scores on the previous form are already "on scale." That is, the formula or table that converts raw scores to scaled scores on the previous form has already been defined. The equating process links each possible raw score on the new form to a scaled score on the previous form.

Simply put, the object of equating is to have the same scaled score on any form of the test represent the same level of the ability the test is measuring. A scaled score of "165," for example, would mean the same thing from one year to the next. However, this definition is not precise enough to serve as the basis for a statistical procedure. A more precise definition is the "equipercentile" definition. It states that a score on one form of the test is equated to a score on another form in a group of students if the two scores have the same percentile rank in that group of students. For example, suppose that in a group of students the 34th percentile on Form A of a test is a raw score of 12; that is, 34 percent of the students scored below 12 on Form A. And suppose that in this same group of students, the 34th percentile on Form B is a raw score of 13; that is, 34 percent of the same group of students scored below 13 on Form B. Then in this group of students a raw score of 13 on Form B would equate to a raw score of 12 on Form A, and these two raw scores would correspond to the same scaled score. This definition forms the basis for the equating of NJCBSPT scores. Methods based on other, simpler definitions are often used, but only when their results are consistent with the results of methods based on the equipercentile definition.

For the NJCBSPT, there is no group of students taking the new form and the previous form under the same conditions (i.e., at approximately the same time, with no instruction in between). The information that links the new form with the previous form is provided by "common items" -- questions repeated from the previous form of the test. The equating methods used for the NJCBSPT assume that students with the same score on the common items would do equally well or poorly on the non-common items of the test. If a group of students performs better on equating items (ca. 40% of the test) than the group who took the test the previous year, this would indicate an improvement in basic skills level.

For example, suppose we focus our attention on the students who took last year's form and answered exactly 10 of the common items correctly. Suppose their average raw score on the full test (last year's form) was 19. Then we would assume that this year's students who answered 10 of the common items correctly would also have had an average raw score of 19 on last year's form, if they had taken it.

This assumption makes it possible to estimate the scores that this year's students would have earned on last year's form and also the scores that last year's students would have earned on this year's form of the test. Therefore, it is possible to estimate the percentiles on either form in the combined group of this year's students and last year's students. The equating is based on the estimated percentiles (or other score statistics) in this combined group.

Some of the equating methods used for the NJCBSPT automatically produce a "linear" equating formula -- one that can be represented on a graph by a single straight line. Methods based on the "equipercentile" definition of equating produce a table linking each score on the new form to a score on the old form, but this table cannot be precisely represented by a simple formula. However, the statisticians who equate the NJCBSPT now approximate this table by a series of linear equating formulas -- different formulas in different portions of the score range.

ETS performs score equating on the basis of the test results received by May and again on the basis of the cumulative results received through September. Each of these equatings includes the application of at least three statistical models: two linear models and one curvilinear model. A second curvilinear model is used if there is evidence of curvilinearity in the equating results. The standard ETS equating software

includes linear models based on the work of Tucker and Levine. When there is little evidence of curvilinearity, the Tucker method is preferred if the old and new form samples of students are quite similar in anchor test means and variance, while the Levine method is preferred if the samples of students differ substantially in anchor test means or variances. When old and new test forms differ in length, as did the Reading Comprehension test forms between 1984 and 1985, the Levine method for tests of unequal reliabilities is used in place of the Levine method for tests of equal reliabilities. The standard ETS method includes a curvilinear model based on an equipercentile equating of the new form to the old form by equating each to the anchor test of common items. A second curvilinear equating method is equipercentile equating, based on frequency estimation. The above equating models are described in Angoff's chapter of Educational Measurement (edited by R. L. Thorndike, American Council on Education, 1971). The equating procedures are performed with a package of standard ETS equating computer programs. The programs have been successfully used in ETS testing programs (including the NJCBSPT) for many years. ETS measurement statisticians review the results of all equating models applied and choose the raw-to-scale score conversion that best reflects the differences in test difficulty indicated by the equating results.

Each year, after the first cycle of scoring, ETS issues to the colleges the "final form" of the raw-to-scaled score conversion table that links the NJCBSPT scaled scores from year to year.

APPENDIX D

A Description of the Proficiency Levels Established by the Basic Skills Council as a Guide for College Placement Procedures

Based upon its understanding of the content and difficulty level of the NJCBSPT, and upon the recommendations of its advisory committees, the Council offers the following general propositions to assist in understanding the test results presented in this report.

Verbal Skills

For the purpose of this report, students who scored below 161 on Total English* were placed in the "lack proficiency" category. Those who fell in the 161-172 range on Total English were placed in the "appear to be proficient in some areas" category while those students above 172 on Total English "appear to be proficient." A more precise understanding of an individual student's scores can be achieved by considering the following.

In the Council's judgment, all students with essay scores of 2, 3 or 4, and those students with an essay score of 5 or 6 but fewer than 80 percent correct on either of the two multiple-choice tests, are seriously deficient in their use of written language. An essay score of 2, 3, or 4 indicates pronounced weakness in writing: in these essays the message is not always clear, the idea is either not developed or not logical, and the conventions of written language are usually not observed. An essay score of 5 or 6, together with fewer than 80 percent correct on one or both of the multiple-choice tests, indicates a need for help in following the conventions of written language, and in developing and comprehending an idea in a coherent manner.

Many students exhibit a pattern of performance that must be reviewed more carefully, since they probably require some assistance in one or more areas according to the requirements and standards of the individual colleges. Students in this category

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*Total English is a composite score based on all three reading and writing sections.

either did not demonstrate proficiency in one or more areas, or their essay and multiple choice scores may have exhibited a discrepancy. For example, a high essay score and a low sentence sense score is a pattern that bears examination. Essay scores of 5, 6 or 7 together with multiple-choice scores above 80 percent correct are "average" in that the essays tend to lack depth and coherence and, despite the multiple-choice scores, the writing samples may exhibit flaws in structure and/or language conventions. An essay score of 7 combined with scores of less than 80 percent correct on one or both of the multiple-choice tests indicates at best a marginal performance. An essay score of 8-12 combined with fewer than 80 percent correct on any one of the multiple-choice tests is a discrepant pattern, since the essay score indicates a range from above-average to excellent, and the multiple-choice scores appear to contradict the essay score.

Students with essay scores of 8-12 and 80 percent correct on both multiple-choice tests seem to be proficient in the basic skills of reading and writing. The writers of these essays have control of both the language and the structures they are using; generally speaking, they can comprehend a relatively mature idea and develop it in standard English.

Computation

A scaled score of 164 or below (18 or fewer questions correct out of 30) indicates pronounced weaknesses in dealing with certain computational operations and, in particular, with problems involving percentages and decimals. Declining scores indicate progressively greater difficulty with operations involving fractions. Students scoring at or below 164 on the computation test are included in the category, "lack proficiency."

The range of scaled scores from 166 to 173 (19 to 24 questions correct) indicates greater familiarity with computation but still shows definite weaknesses. The particular weaknesses of a student can be identified only by examining individual item responses. Students falling in the range of 166 to 173 on the computation test fall in the category, "appear to be proficient in some areas."

Students who achieve a scaled score of at least 174 (25 questions correct) seem to be proficient in the computational skills measured by this test and fall in the "appear to be proficient" category.

Elementary Algebra

Students who achieve a scaled score of 165 or below (13 or fewer questions correct out of 30) lack any understanding of elementary algebra. Such students may possess a smattering of knowledge but have difficulty with a wide variety of elementary operations, and are not able in general to perform sustained operations involving a succession of simple steps. Students in this category, "lack proficiency" probably need to restudy elementary algebra from the beginning.

The particular difficulties of students who score in the scale range from 166 to 181 (14 to 24 questions correct) vary. They have some misconceptions, have some trouble dealing with equations involving letters rather than numbers, and probably cannot handle sustained operations well. The type of assistance or course work such students may require will depend on each student's background and can be determined by careful examination of the particular patterns of item responses. Students scoring in the range of 166 to 181 on elementary algebra are included in the "appear to be proficient in some areas" category.

Students who achieve a scaled score of 183 and above (25 or more questions correct) seem to have no widespread weaknesses in performing elementary algebraic operations and fall in the "appear to be proficient" category. They probably can do simple, sustained operations. The test, however, does not extend far enough in difficulty level to determine whether students scoring in this highest range are able to complete a more complex succession of simple operations.

ADDITIONAL NJCBSPT PUBLICATIONS AND RELATED REPORTS*

Information Bulletin 1992-93.

Interpreting Scores on the New Jersey College Basic Skills Placement Test.

Interpreting Mathematics Scores on the New Jersey College Basic Skills Placement Test.

Scoring the Essays.

Research Monographs:

Cycle-to-Cycle Consistency of the Scoring of NJCBSPT Essays. Educational Testing Service, 1986.

The Effects of Time Limits on the Quality of NJCBSPT Essays. Educational Testing Service, 1987.

Teaching Reading & Writing. New Jersey Basic Skills Council, 1984.

Thinking Skills: An Overview. New Jersey Basic Skills Council, 1986.

Effectiveness of Remedial Programs in Public Colleges and Universities, Fall 1987-Spring 1989. New Jersey Basic Skills Council, 1992.

**Publications and reports are available from the Basic Skills Assessment Program, New Jersey Department of Higher Education, 20 West State Street, CN 542, Trenton, NJ 08625, (609) 292-8881.*

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